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Guide to Preparing Manuscripts

Editorial Policy—*Criminology & Public Policy* (CPP) is a peer-reviewed journal devoted to the study of criminal justice policy and practice. The central objective of the journal is to strengthen the role of research findings in the formulation of crime and justice policy by publishing empirically based, policy-focused articles. Authors are encouraged to submit papers that contribute to a more informed dialogue about policies and their empirical bases. Papers suitable for CPP not only present their findings, but also explore the policy-relevant implications of those findings. Specifically, appropriate papers for CPP do one or more of the following:

- Strengthen the role of research in the development of criminal justice policy and practice
- Empirically assess criminal justice policy or practice, and provide evidence-based support for new, modified, or alternative policies and practices
- Provide more informed dialogue about criminal justice policies and practices and the empirical evidence related to these policies and practices
- Advance the relationship between criminological research and criminal justice policy and practice

The policy focus of the journal requires articles with a slightly different emphasis than is found in most peer-reviewed academic journals. Most academic journals look for papers that have comprehensive literature reviews, provide detailed descriptions of methodology, and draw implications for future research. In contrast, CPP seeks papers that offer literature reviews more targeted to the problem at hand, provide efficient data descriptions, and include a more lengthy discussion of the implications for policy and practice. The preferred paper describes the policy or practice at issue, the significance of the problem being investigated, and the associated policy implications. This introduction is followed by a description and critique of pertinent previous research specific to the question at hand. The methodology is described briefly, referring the reader to other sources if available. The presentation of the results includes only those tables and graphs necessary to make central points (additional descriptive statistics and equations are provided in appendices). The paper concludes with a full discussion of how the study either provides or fails to provide empirical support for current, modified, or new policies or practices. The journal is interdisciplinary, devoted to the study of crime, deviant behavior, and related phenomena, as found in the social and behavioral sciences and in the fields of law, criminal justice, and history. The major emphases are theory, research, historical issues, policy evaluation, and current controversies concerning crime, law, and justice.

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EDITOR'S PREFACE

I M P R I S O N M E N T A N D C R I M E

Confronting crime with science

Thomas G. Blomberg

Florida State University

Since the November, 2001 inaugural issue, *Criminology and Public Policy* (CPP) has employed several strategies to improve the discourse and linkage between criminological research and public policy. These strategies have included the initial distribution of the journal free of charge to all American Society of Criminology (ASC) members and to approximately 10,000 individuals and organizations involved in justice-related policy and practice including all members of Congress. Additionally, efforts were focused upon increasing the media's involvement with dissemination of criminological research and public policy linkages through the issue of a press release for each CPP issue.

CPP became widely recognized as an excellent academic journal after only a few years of publication (Sorenson et al. 2006). However, there remained a need for scholars to articulate more clearly the logical and actionable policy and practice implications emanating from their research. This led to the introduction of reaction essays as a means of encouraging greater policy and practice discussion. After CPP implemented the reaction essay format, it became evident that essay authors often focused more on strengths and weaknesses of the research methodology employed in the articles rather than the specific policy and practice implications that could be drawn from the article's findings. Accordingly, CPP renamed the reaction essays to be "policy essays" to clarify their intended policy and practice purposes.

Underlying CPP's challenges in promoting meaningful research and policy discourse has been a general reluctance by researchers and policy/practitioner professionals alike to move beyond their traditional roles. Understandably, researchers often voice discomfort when asked to directly address the policy/practice implications of their research which they frequently find incomplete while policy/practitioner professionals communicate difficulty in drawing meaningful policy and practice recommendations from research that is often highly quantitative, technical, and with nuanced or equivocal findings and conclusions. Very importantly, however, CPP has found that despite these challenges both the research and

Direct correspondence to Thomas G. Blomberg, College of Criminology and Criminal Justice, Florida State University, 634 W. Call Street, Tallahassee, Florida 32306-1127 (e-mail: tblomberg@fsu.edu).

policy/practitioner communities are anxious to move forward with a growing recognition that criminology and public policy must be ever evolving in response to our research and knowledge advancements. *CPP*'s experience, to date, demonstrates that there is now an unprecedented enthusiasm and interest for accelerating the linkage of criminology's research with public policy.

CPP has and continues to contribute to this process of advancing research and public policy as evidenced by this Special Policy Issue featuring the manuscript, "Imprisonment and Crime: Can Both Be Reduced?" In an effort to gain broader input with policy essay contributions from key policy/practitioner professionals, we are introducing the use of an Executive Summary for the lead research article in place of an Abstract. Responses from a number of the contributing policy essayists on the usefulness of the Executive Summary were uniformly positive. Our plan is to continue employing executive summaries in the future for published research articles. These executive summaries will be aimed at (1) identifying the topics, problems, and associated research and policy questions; (2) summarizing the findings that answer the questions posed; and (3) articulating the most promising policy and practice related steps given the article's findings. We believe the executive summaries will prove useful in facilitating more direct linkage between research and public policy.

We are very pleased that this Special Policy Issue was featured at an ASC-sponsored Congressional luncheon on February 15, 2011 in Washington, DC. We are hopeful that this effort will provide a useful precedent for *CPP* and ASC in their continuing efforts to more effectively confront crime with science-linked policies.

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Thomas G. Blomberg is Dean and Sheldon L. Messinger Professor of Criminology at Florida State University's College of Criminology and Criminal Justice and Editor of *Criminology & Public Policy*. He has published widely in the areas of penology, social control, and education and delinquency. His recent books are *American Penology: Enlarged Second Edition* (2009) (with Karol Lucken); *Punishment and Social Control, Enlarged Second Edition* (2003) (with Stanley Cohen); and *Data-Driven Juvenile Justice Education* (2001) (with Gordon Waldo and Mark Yeisley).

EDITORIAL INTRODUCTION

I M P R I S O N M E N T A N D C R I M E

From mass incarceration to targeted policing: Introduction to the Special Issue

Richard Rosenfeld

University of Missouri-St. Louis

Mass incarceration is the criminological issue of our time. A close contender is so-called hot-spots policing. The former invites condemnation from most criminologists. The latter inspires confidence that smart policing can reduce crime. In their provocative and important paper that is the focus of this special issue of *Criminology & Public Policy*, Steven Durlauf and Daniel Nagin (2011) bring the two issues together and propose that we might be able to achieve crime reductions by shortening prison sentences and using the cost savings to support more and better policing. They rest their case squarely in a deterrence framework. They argue that increasing the severity of punishment through marginal increases in the length of prison sentences has weak deterrent effects, at best; by the same logic, shortening prison sentences should not produce appreciable crime increases. In contrast, increasing the perceived certainty of punishment can reduce crime without increasing imprisonment levels through targeted policing strategies that reduce criminal opportunities. If the authors are right, this is a win-win strategy for crime control and criminal justice policy.

Durlauf and Nagin (2011) are careful to delimit scope of their analysis. They do not examine the incapacitation effects of imprisonment or retribution as a goal of punishment. They do not consider in any detail crime-reduction approaches that extend beyond the criminal justice system. They acknowledge but do not thrash out the daunting political obstacles to shifting resources from state corrections budgets to local police departments. They also acknowledge the limited, albeit promising, research base for the effectiveness of targeted enforcement and call for more and better research. Nor do they claim originality for their assessment of the deterrent effects of imprisonment and policing. The deterrence framework they invoke dates to Beccaria and Bentham. Others have advocated smarter

Direct correspondence to Richard Rosenfeld, Department of Criminology and Criminal Justice, University of Missouri-St. Louis, One University Blvd, St. Louis, MO 63121 (e-mail: richard_rosenfeld@umsl.edu).

policing as a substitute for more incarceration (e.g., Weisburd, 2008). Durlauf and Nagin's (2011) contribution is to ground deterrence in the logic and methods of modern economics and draw out the research and policy implications of increasing the certainty and reducing the severity of punishment. I believe they have succeeded admirably in achieving their objectives, especially if it is assumed that their overriding objective was to provoke thoughtful and informed discussion of their proposals by academic experts and policy professionals alike. As former Attorney General Richard Thornburgh (2011) puts it in his reaction essay, Durlauf and Nagin's analysis provides an ideal "jumping off point" for serious debate.

The 16 reaction essays in this issue are uniformly sympathetic to Durlauf and Nagin's (2011) basic argument, even while many are critical of specific aspects of their evaluation of the deterrence literature and diagnosis of the trade-offs between reductions in imprisonment and enhancements in policing. None proposes increasing incarceration or returning to policing as usual to promote public safety. Yet most of the discussants would have liked the authors to deepen their analysis of the criminal justice system and extend their arguments beyond the stated objectives. I emphasize these issues in the introduction in the hopes of promoting broader commentary on Durlauf and Nagin's (2011) proposals and advancing the critically important research agenda outlined at the end of their article.

Alfred Blumstein (2011) and John Goldkamp (2011) suggest the authors might have given greater attention to celerity, the third wheel of the deterrence trifecta. Goldkamp points to the courts as a neglected component of the criminal justice system that impedes the certainty of punishment through lengthy delays in case processing and high rates of case dismissals. Eric Baumer (2011) argues that increases in the time served in prison, brought about by restrictive parole policy and practice, have contributed more to the growth in prison populations than have increases in statutory sentence length. As such, Durlauf and Nagin's (2011) proposal to repeal mandatory-minimum and three-strikes sentencing laws may be less effective in curbing imprisonment growth than reducing returns to prison for parole violations and restoring the discretion of parole boards to authorize the early release of prisoners from confinement. The major statutory impediment to lowering imprisonment levels, then, may not be mandatory-minimum or three-strikes sentencing but truth-in-sentencing laws that require convicted offenders to serve the bulk of their sentence in prison.

Several of the discussants chide Durlauf and Nagin (2011) for understating the weight of social science evidence that questions the effect of punishment severity on crime reduction and for overstating the promise of targeted policing. Elliott Currie (2011) and Michael Tonry (2011) read the deterrence literature as overwhelmingly critical of long prison sentences on both specific and general deterrence grounds. Equivocating on the evidence in hand and recommending more research before definitive conclusions are drawn unnecessarily weaken the policy argument, Currie maintains, making it easier for policymakers to ignore it. On the policing side, Baumer (2011) cautions against assuming without additional research that the decreases in criminal activity attributable to the targeted policing of small geographic

areas are translatable to reductions in the aggregate crime rates of larger populations. In a similar vein, Goldkamp (2011) cites studies indicating that targeted policing of hot spots produces crime reductions of fairly short duration. The gist of these comments is that policy recommendations should be more forceful and definitive with respect to the weak deterrent effects of imprisonment and more cautious regarding the presumably strong deterrent effects of policing.

Durlauf and Nagin's (2011) recommendation for more and better policing comes in for additional criticism, primarily because they do not dwell on the possible adverse consequences of intensifying patrols in disadvantaged urban areas. Marie Gottschalk (2011) argues that increasing police presence in minority communities, without making the police more accountable to community members, will only reinforce widespread views of the police as an "occupying army." Tonry (2011) warns that intensified patrols and police crackdowns are sure to increase racial profiling. Baumer (2011) questions the marginal deterrent effects of greater police presence in high-crime communities that are already heavily policed.

Even though Durlauf and Nagin (2011) emphasize the preventive deterrent effects of targeted policing—crimes averted by greater police presence rather than crimes cleared by arrest—Mark Bergstrom (2011) and John Goldkamp (2011) caution that more police may unavoidably lead to more arrests, especially for drug offenses, and thereby drive up imprisonment rates. Shawn Bushway and Peter Reuter (2011) applaud the authors for bringing the fundamentals of economic reasoning to the analysis of deterrence but advise that the dynamics of drug markets may undermine the benefits of taking sellers off the street without corresponding reductions in demand. Fundamental changes in police training and organizational incentives are needed, according to William Bratton (2011) and Peter Neyroud (2011), in order to move the police away from arrests as the principal objective of law enforcement and toward the use of alternative evidence-based practices for controlling crime. David Weisburd (2011) goes further: the police should stop focusing on people all together and start focusing on places as the key locus of enforcement.

But why limit the discussion of crime control to the prisons and the police? Crime control is coproduced, Philip Cook (2011) points out, by public and private actors. Cook calls for greater attention to the deterrent effects of target-hardening tools such as LoJak and the private security initiatives of business improvement districts that complement public law enforcement. Other discussants diverge even further from Durlauf and Nagin's (2011) stated objectives by broadening the focus on crime reduction well beyond the lens of deterrence. Gottschalk (2011) criticizes the authors for deemphasizing social welfare reform in favor of simply "recalibrating" the criminal justice system. Currie (2011) sums up this sentiment by calling for more discussion of "how to build communities that need less 'deterrence' in the first place."

And then there is the question of politics. Even setting aside the institutional obstacles to transferring resources from state to local budgets, several discussants question the willingness of public officials to accept policy recommendations that could make them look soft on

crime and criminals. That has not always been the case, as Gottschalk (2011) points out in her discussion of politicians of the past who have been willing to risk public criticism by commuting the sentences of lifers and releasing other inmates on the basis of good conduct in prison. But with rare exceptions, those days are gone. When it comes to punishment, Tonry (2011) maintains, public officials are immune to evidence regarding the effectiveness of alternatives to incarceration. Arguments premised on deterrence, Marc Mauer (2011) argues, are simply not convincing to policy makers who are wedded to an incapacitation rationale for imprisonment or, as James Q. Wilson (2011) suggests, to a retributive model of justice.

Although the current fiscal crisis provides an opening for policy makers to reconsider the benefits in light of the high costs of lengthy prison sentences, Neyroud (2011) contends that they are not likely to transfer cost savings to the police but to seek deep cuts in both policing and corrections. And what do we really know about the cost savings from shorter prison sentences? Thornburgh would have liked the authors to produce budget estimates of any savings from reduced imprisonment and the dollars needed to ramp up policing. Mauer (2011) points out that prison budgets tend to be quite sticky in the short run because real savings necessitate closing entire facilities and laying off staff, actions that are consistently opposed by corrections officers' unions and the rural communities dependent on the local prison for their economic survival.

Despite the counsel of some of the discussants that social scientists know enough about the economic and social costs of mass incarceration to make a powerful case for reversing current sentencing and confinement policies, it seems evident that more research is needed on the deterrent effects of shortening prison terms and increasing targeted policing. Durlauf and Nagin (2011) close their essay fittingly by calling for a major investment in research along these lines. Laurie Robinson (2011), Assistant Attorney General for the Office of Justice Programs, indicates in her reaction essay that their proposals "provide a good frame of reference" for developing a federal research agenda on criminal justice policy and practice. I would add that the thoughtful commentary on Durlauf and Nagin's (2011) article in this special issue of *Criminology & Public Policy* should inform that agenda as well.

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Richard Rosenfeld is Curators Professor of Criminology and Criminal Justice at the University of Missouri-St. Louis. He has published widely on the relationship between crime trends and the economy, crime statistics, and crime control policy. Professor Rosenfeld is a Fellow of the American Society of Criminology and served as the Society's President in 2009–2010.

EXECUTIVE SUMMARY

I M P R I S O N M E N T A N D C R I M E

Overview of “Imprisonment and crime: Can both be reduced?”

Steven N. Durlauf

University of Wisconsin

Daniel S. Nagin

Carnegie Mellon University

Research Summary

This study argues that it is a realistic possibility that crime, prison costs, and imprisonment numbers can be reduced simultaneously if policy makers shift from a primary reliance on severity-based policies, mandating lengthy prison terms, to a more effective use of police to make the risks of crime clearer and the consequences of criminal activity faster and more certain. We make the following basic claims:

- 1. The marginal deterrent effect of increasing already lengthy prison sentences is modest at best.*
- 2. Increasing the visibility of the police by hiring more officers or allocating existing officers in ways that heighten the perceived risk of apprehension seems to have substantial marginal deterrent effects.*
- 3. The experience of imprisonment seems to be criminogenic.*

Policy Implications

With respect to broad conclusions, we believe that it is reasonably clear that lengthy prison sentences particularly in the form mandatory minimum-type statutes such as California’s Three Strikes Law are difficult to justify on a deterrence-based, crime-prevention basis. They might be justifiable based on either incapacitation benefits or along retributive lines. Although we do not survey the evidence on incapacitation, we are skeptical of the incapacitative efficiency of incarcerating aged criminals.

If one takes the total resources devoted to crime prevention as fixed, then our conclusions about the marginal deterrent effects of certainty and severity suggest that crime prevention would be enhanced by shifting resources from imprisonment

to policing. In 2006, nationwide expenditures on police and corrections totaled \$168 billion, with policing receiving 59% of this total. Our analysis does not provide specific guidance on how much the police share should be increased, but it is a realistic possibility that even a modest shift in resources away from imprisonment could reduce both crime and imprisonment. Another possible candidate beneficiary beside the police for a crime-reducing resource shift would be enhanced probation and parole supervision services along the lines of Project Hope.

However, even such apparently self-evident conclusions might be difficult to translate into a defensible operational plan beyond a strong recommendation against any additional escalation of sentence length for initially high sentences. Our recommendations leave open many questions about the way resources should be used to enhance certainty-based policies. The statistical literature on police resources and crime rates provides little guidance on how those resources should be used. Likewise, no demonstration has been given that probation/parole-monitoring systems designed along the lines of Project Hope are generalizable to other jurisdictions.

Our caveat on the difficulty of providing general policy advice from the existing literature is no deeper than the recognition that the details matter for any policy changes that simultaneously reduce sentences and shift the resource savings to policing, probation, and parole supervision. We conclude by laying out a research program for addressing these important details. Key elements of the plan include the following:

1. We are skeptical that large numbers of high-crime-reduction, severity-based policies exist. In contrast, we believe that the empirical evidence indicates that opportunities for devising high-impact, certainty-based policies are far more abundant, particularly involving the strategic deployment of police. The identification of such police deployment strategies should be a top priority because high-impact policies are those that can reduce imprisonment and crime simultaneously.
2. Evidence of severity and certainty effects needs to be extrapolated beyond the current dimensions of the U.S. sanction regime. Sentence lengths in Western European countries are much shorter than in the United States. Research based on European data on the deterrent effect of shorter sentence length should be a priority.
3. More research is needed on the process by which individuals near the margin of choosing to commit a crime perceive sanction risk and severity. For the criminally inclined, we suspect that risk must be learned from experience or from word of mouth. A small amount of literature examines the updating of sanction risk perceptions based on experience with detection and non-detection for crimes committed. This work is important and should be extended. Likewise, a small body of research examines how criminal opportunity characteristics affect sanction risk

perceptions. This type of work should focus particularly on how police deployment tactics affect perceptions of apprehension risk.

4. Research on the deterrent effect of sentence length, in particular, and on the effects of changes in sentencing statutes on crime rates and imprisonment rates, in general, is hampered seriously by the lack of data on the distribution of sentence lengths and time served by different types of offenders across states. Prison census data should be expanded to include all 50 states and should be made available in an easily accessible and flexible format.
5. The effects of imprisonment on the imprisoned are, in our view, much under-researched. We are concerned particularly with the possible criminogenic effects. Imprisonment means that an individual's labor market connections are attenuated and that human capital stock is likely to depreciate. Furthermore, postrelease, ex-convicts might find labor market possibilities attenuated because of stereotype effects. The possibilities need to be quantified.
6. A final area in which more research is needed concerns the sanction effect we largely do not address—incapacitation. As we repeatedly emphasize, deterrence effects are necessary for a sanction policy to reduce both crime and punishment. This conclusion, however, does not imply that incapacitation does not have a role to play in crime-control policy. Our claims are perfectly compatible with a policy that incapacitates incorrigible offenders; the key to our argument is to isolate these types from the rest of the population of offenders. To our knowledge, no proven technology exists for the *ex ante* identification of high-rate offenders with acceptable false-positive rates. Thus, we also recommend that more research be done on developing this prediction capacity.

The agenda that we outline is ambitious and will require the type of sustained, substantial, and coordinated resource commitment that only the federal government can provide. The National Institutes of Health are the model we have in mind for the way this research program should be administered. The obvious candidate for taking on this responsibility is the National Institute of Justice (NIJ). However, for the NIJ to manage such a research program effectively along the lines of an NIH institute, it is incumbent that it adopt the reforms outlined in the recently released National Research Council report *Strengthening Scientific Research and Development at the National Institute of Justice*. We, thus, lend our full support to the report's recommendations.

Imprisonment and crime

Can both be reduced?

Steven N. Durlauf

University of Wisconsin

Daniel S. Nagin

Carnegie Mellon University

Since 1972, the rate of incarceration in U.S. state and federal prisons has increased every year without exception from a rate of 96 prisoners per 100,000 population in 1972 to 504 prisoners per 100,000 in 2008 (BJS, 2008).¹ Counting those housed in jails, the nation's total incarceration rate has surpassed 750 per 100,000 (Liptak, 2008). Accompanying the 40-year increase in imprisonment has been a companion growth in corrections budgets from \$9 billion in 1982 to \$69 billion in 2006, which is a 660% increase (BJS, 2008).

Much research has been done on the effect of this increase in incarceration on crime rates as well as on the social and economic costs of the ensuing fivefold increase in the nation's imprisonment rate. The point of departure for this article is the recognition that sanction policies that reduce both crime and punishment have the desirable feature of avoiding not only the costs of crime but also the costs of administering punishment. As a theoretical matter, this observation is certainly not new and was recognized at least as long ago as Becker (1968). Of course, the policy question is whether, relative to the status quo, alternative policies exist that can achieve these simultaneous effects. In this article, we argue that it is a realistic possibility that crime, prison costs, and imprisonment numbers can be

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1. Incarceration rates in state prisons declined slightly in 2009, but increased incarceration in federal prisons resulted in a small increase in the combined state and federal incarceration rates (Pew Center for the States, 2010).

reduced simultaneously if policy makers shift their focus from a primary reliance on severity-based policies, mandating lengthy prison terms, to a focus on a more effective use of police to make the risks of crime clearer and the consequences of crime faster and more certain.

We make no claim about the novelty of our overall policy contention that, given the set of sanctions in place in the current criminal justice system, a simultaneous improvement is possible. In many ways, our position echoes claims advanced in two recent books, Mark Kleiman's (2009) *When Brute Force Fails: How to Have Less Crime and Less Punishment* and David Kennedy's (2009) *Deterrence and Crime Prevention: Reconsidering the Prospect of Sanction*. Aspects of our position also might be found in the commentaries of authors such as Clear (2007), Doob and Webster (2003), Garland (2001), Irwin (2005), Tonry (2004), Useem and Phiel (2008), and Western (2007). Our hope is that the particular framing of the arguments we provide will provide an impetus for a reorientation away from the severity-oriented, crime-prevention strategies that have prevailed for the last 40 years toward more certainty-oriented, crime-prevention strategies.

The evidentiary bases for our conclusion are taken from recent reviews of the empirical studies on deterrence conducted by the authors and colleagues.² These reviews led us to the following broad empirical conclusions that inform our policy views:

1. The marginal deterrent effect of increasing already lengthy prison sentences is modest at best.
2. Increasing the visibility of the police by hiring more officers and by allocating existing officers in ways that heighten the perceived risk of apprehension consistently seem to have substantial marginal deterrent effects.
3. The experience of imprisonment compared with non-custodial sanctions such as probation, sometimes called specific deterrence, does not seem to prevent reoffending. Instead, the evidence suggests the possibility of a criminogenic effect from imprisonment.

Together, these conclusions have a range of policy implications; most important, they call into general question the efficiency of current sanction policies and point in directions along which these policies should be changed.

This article is organized as follows: In the next section, we discuss the conceptual framework for the determination of criminal behavior that explains why, theoretically, crime can be reduced without an increase in the resource commitment to the criminal justice system. The theoretical possibility of a cost-free reduction derives from a shift toward certainty-based as opposed to severity-based sanction policies. We also argue that for a sanction policy to reduce both imprisonment and crime simultaneously, it must deter in addition to incapacitate would-be criminals. Thus, the possibility of deterrence is crucial to the goal of reducing prison populations without incurring higher crime rates. The next

2. Our conclusions derive from Durlauf and Nagin (in press), Apel and Nagin (2009), as well as Nagin, Cullen, and Jonson (in press); this article will rely especially heavily on Durlauf and Nagin.

section reviews and critiques the empirical evidence on the deterrent effect of severity-based and certainty-based sanction policies. Policy and research recommendations are discussed in the last section.

At the outset, we note two important restrictions to the scope of this article. First, we restrict our attention to changes in sanction policy that have the potential to reduce both imprisonment and crime. Imprisonment and crime might be reduced by making greater investments in non-sanction-related policies. For example, evidence is mounting regarding the effectiveness of early childhood development programs in reducing criminality (Heckman, Malofeeva, Pinto, and Savalyev, 2010; Piquero, Farrington, Welsh, Tremblay, and Jennings, 2009).³ We restrict our attention to sanction policies, in part, because non-sanction-related policy alternatives have received considerable attention elsewhere. Even more important, we think it valuable to consider the restricted question of whether the current level of investment in the criminal justice system is allocated most effectively among its various components. As we observe in the Policy Implications and Future Research section of this article, the mechanics of shifting resources from imprisonment to policing is institutionally difficult because the former is primarily a state and federal function and the latter is primarily a local government function. Notwithstanding, both functions are understood by policy makers, mostly elected officials, to be components of an integrated system to control crime and punish criminal wrongdoing. Shifting resources from the criminal justice system to other activities such as education or early childhood development in our judgment would pose far more daunting institutional and political challenges to justify to policy makers. We, thus, restrict our attention to the issue of reallocation of resources within the criminal justice system.

Second, we note that our analysis does not address incapacitation effects, which constitute a logically independent way of reducing crime from deterrence. We recognize that the possibility that incapacitation effects are large represents a potential challenge to our objective of reducing crime and imprisonment, and we will return to this point in the Policy Implications and Future Research section.

Key Concepts

Discourse about deterrence often takes the form of one side, with one side, mostly, but not always, economists arguing that sanction threats always deter and the other side, mostly, but not always, criminologists arguing that sanction threats never deter. Based on our assessment of the existing evidence, it would be unwise for criminologists to ignore that deterrence should be part of any coherent crime-control policy. However, when deterrence effects are

3. Borghans, Duckworth, Heckman, and ter Weel (2008) provided a recent survey of the state of knowledge of the development of cognitive and non-cognitive skills. An important theme of recent research is the relative manipulability of non-cognitive skills such as self-control, which has obvious implications for criminal behavior.

unpacked, it is clear that sanction threats are not universally efficacious as magnitudes of the deterrent effects range from none to seemingly very large.

In this section, we discuss possible reasons why substantial heterogeneity persists in the size of deterrent effects and the implications of such heterogeneity for sanction policy. In particular, we discuss the conceptual basis for our claim that it is possible for changes in current sanction policy to reduce both crime and imprisonment. To this end, we make three related points.

First, levels of deterrence always depend on the interplay of the certainty and severity of punishment. Thus, it is meaningless to say that one is more important than the other in determining the strength of deterrence or the level of the crime rate. However, it is meaningful to consider the relative magnitude of the deterrent effects of certainty and severity resulting from changes in their status quo levels and, therefore, to make claims about their relative importance at the margin.

Second, a sanction policy that reduces crime solely by incapacitation necessarily will increase the rate of imprisonment. In contrast, if the policy also prevents crime by deterrence, then it is possible that it will be successful in reducing both imprisonment and crime. Hence, the rejection of deterrence as a crime-reduction mechanism implicitly can constitute a reason for mass incarceration.

Third, if the experience of imprisonment is criminogenic, then an added benefit of sanction policies that reduce both crime and imprisonment is that it likely averts reoffending attributable to the possible criminogenic effects of the prison experience. Although these criminogenic effects have yet to be documented with much precision, their possible existence reinforces our general policy recommendation.

The Interplay of Certainty and Severity in Producing Deterrence

The theory of deterrence is predicated on the idea that a sanction regime, by affecting the relative anticipated costs and benefits of a crime, can lead at least some members of a population to choose not to commit crime. Sanction regimes, from this perspective, simply raise the anticipated costs of criminal activity. As such, one of the key concepts of deterrence is the severity of punishment. In the context of this article, severity refers to sentence length, which we denote by L . Severity alone does not deter; the likelihood of a punishment's imposition also matters to the criminal choice. The offender first must be apprehended, presumably by the police. He next must be charged, prosecuted successfully, and finally sentenced by the judiciary. None of these successive stages in processing through the criminal justice system is certain. Thus, another key concept in deterrence theory is the certainty of punishment, which we denote by p . In this regard, the most important set of actors are the police; absent detection and apprehension, conviction or punishment is not possible. For this reason, we discuss separately what is known about the deterrent effect of police.

In its simplest form, the economic model of deterrence theorizes that would-be offenders compare the expected utility under the choice of committing a crime with the expected utility of not committing a crime. These types of calculations cannot be reduced to the sum of a function of p and a function of L ; the two terms interact in determining the expected costs and benefits of a crime. Durlauf and Nagin (in press) provided formal algebraic descriptions of this interaction,⁴ but the basic intuition is evident when one considers that no level of severity will deter when no prospect of actual punishment is present (i.e., $p = 0$) just as certain punishment (i.e., $p = 1$) will not deter without severity (i.e., $L = 0$).

Moving beyond these extreme, and admittedly fanciful, cases, the interaction of certainty and severity in producing deterrence has a basic implication for the arguments that we will advance here; the deterrent effect of a change in p will depend on the level of L , and conversely, the deterrent effect of a change in L will depend on the level of p . Thus, even though we make reference throughout this article to the deterrent effects of certainty and severity, it is important to understand that these references concern incremental changes from the status quo levels in p and L , namely incremental changes in p at prevailing levels of L or, alternatively, incremental changes in L at prevailing levels of p . Because certainty and severity interact, it does not follow that incremental changes in p (at prevailing levels of L) and incremental changes in L (at prevailing levels of p) always will be equally effective in generating deterrence. In Durlauf and Nagin (in press), we discussed in detail the reasons why the magnitude of deterrent effects depend upon the interaction of certainty and severity and why certainty and severity effects themselves might be heterogeneous because of heterogeneity in individual characteristics and in criminal opportunities.

As will be described in the next section, the empirical support for the deterrent effect of certainty is far stronger than for severity. Several theoretical explanations suggest why this finding should not be regarded as surprising. Prison sentences necessarily are experienced over time and with delay from the time of the criminal act. Both might contribute to the dearth of strong evidence of a severity effect. In economics, the concept of discounting is used to explain why future consequences might be given less weight than present consequences.⁵ Criminals might have higher discount rates than the typical member of the population. Indeed, much psychological and criminological research documenting the present orientation of criminal offenders (Jolliffe and Farrington, 2009; Moffitt,

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4. One easy way to see the interaction is to consider the expected utility of committing a crime. Assume that the utility of committing a crime and not being apprehended is the same as being apprehended and given a sentence of length 0. Assume that apprehension means that a sentence of length L is received with certainty. The expected utility of a criminal can be written as $pU_C(L) + (1 - p)U_C(0)$, where $U_C(\cdot)$ denotes the utility of a crime as a function of sentence length. It is immediate that certainty and severity interact as is shown the fact that p is multiplied by $U_C(L)$ in the expected utility calculation.
5. See Polinsky and Shavell (1999) for a formal analysis of the importance of discounting in determining the effects of changes in sanction severity.

1993; White et al. 1994; Wilson and Herrnstein, 1985) strongly supports this possibility. Furthermore, present orientation might cause would-be offenders to be far more attentive to cues related to the likelihood of apprehension than to the future punishment they will receive in the event of apprehension. For example, would-be offenders might be affected little by the prospect of a 50% increase in sentence length from, for example, 10 to 15 years but might be affected greatly by a 50% increase in apprehension probability from, for example, .2 to .3 even though each policy means that a given crime is associated with the same expected number of years of time served. Also, as discussed in Durlauf and Nagin (in press), other factors that might result in differential deterrent effects of certainty and severity are cognitive biases resulting in the overweighting of small (and large) probabilities; perhaps paradoxically, these biases operate in a way that might render subjective beliefs about the probability of apprehension sensitive to the actual probabilities.

The Interrelationship of the Crime and Imprisonment Rates

Our emphasis on deterrence stems from our interest in identifying policies that can reduce imprisonment and crime rates simultaneously. An essential feature of this perspective is that the imprisonment rate and crime rates are treated as joint outcomes of sanction policies determining certainty and severity of punishment. One implication of this perspective is that the imprisonment rate should not be regarded as a policy variable per se but should be treated appropriately as an outcome of sanction policies determining who goes to prison and for how long.

Blumstein and Nagin (1978) examined the relationship of imprisonment and crime rates in the context of a model that allowed for both incapacitation and deterrent effects. Two critical findings of their analysis were that, in the absence of deterrent effects, a logically necessary trade-off takes place between imprisonment and crime rates and that the presence of a deterrent effect is a necessary condition for the possibility that a change in sanction policy could reduce crime and imprisonment rates simultaneously. The intuition for this conclusion is straightforward; crimes averted by incapacitation necessarily require the incarceration of the individuals who otherwise would be committing crimes outside the prison walls. However, if deterrent effects are present, then heightened sanction risks, when perceived as credible, can result in both lower crime rates and lower imprisonment rates. Again the intuition is straightforward; deterred crimes mean that no one can be punished for them.

That said, the presence of deterrence effects does not guarantee the existence of such policies. What are the technical requirements for a change in sanction policy to reduce both imprisonment and crime? The concept of an elasticity from economics can be used to characterize what is needed. An elasticity measures the absolute value of the percentage change in some outcome variables with respect to a 1% change in another variable, holding other variables constant. Formally, suppose that the crime rate C is functionally dependent on certainty and severity (i.e., $C(p, L)$). Let e_p and e_L denote the elasticities of the crime rate

with respect to p and L , respectively. The Blumstein and Nagin (1978) analysis demonstrated that a 1% increase in either p or L will induce a sufficiently large reduction in the crime rate to reduce the imprisonment rate also if the respective elasticity of the crime rate with respect to the policy variable is greater than 1. Conversely, if the magnitude of either elasticity is less than 1, then the decline in the crime rate associated with an increase in that sanction policy variable will not be sufficiently large to avert an increase in the imprisonment rate. In turn, Blumstein and Nagin showed that, for either e_p or e_L to exceed 1, a deterrent effect must be present. The intuition for this result has been stated already; crime prevention by incapacitation necessarily requires the incarceration of an individual who otherwise would be criminally active. Technically, this concept ensures that e_p and e_L must be less than 1. However, if deterrent effects are present, then crime reduction does not necessarily require the actual incarceration of individuals who otherwise would be committing crimes. This outcome makes for the possibility of simultaneously having both less crime and less imprisonment. We will illustrate this possibility in a later section with a numerical example.

Although we have treated p as a policy variable, it is important to recognize that its role with respect to the criminal decision process can be complicated. For criminal decisions, what matters is the subjective probability a potential criminal assigns to apprehension (i.e., p^e). This subjective probability can be affected by the police in various ways. Most obvious, presumably a relationship exists between the subjective belief p^e and the objective probability p . Conventional notions of rationality, at least in economics, impose the restriction that $p^e = p$, but increased objective certainty of punishment will induce deterrence so long as p^e is an increasing function of p . This can happen through several channels. The experience of capture might cause the apprehended offender to revise upward his estimate of apprehension risk and thereby deter him from future crime. Indeed, Anwar and Loughran (2009), Hjalmarsson (2009), Horney and Marshall (1992), and Lochner (2007) found evidence that such risk updating seems to occur. Furthermore, other criminals might gain new information about the risk of apprehension from the apprehension experience of criminal compatriots, but the limited research on such indirect experiential effects suggests that they are small (Lochner, 2007).⁶ Announcements of changes in police expenditures and the like can lead directly to upward adjustments of the probability of punishment. So, even if one rejects the economist's notion of rationality when modeling how crime choices are made, the policy variable p still matters.

Our emphasis on crime and imprisonment rates as joint outcomes of the sanction regime also has the implication that the clearance rate for crimes (i.e., the percentage of actual perpetrators of crimes who are apprehended) is an incomplete signal of the certainty

6. The presence of indirect experiential effects from enforcement might be context specific. Many European countries require television owners to pay a licensing fee. Electronic means are used to detect non-compliers. Rincke and Traxler (in press) found substantial evidence of enforcement spillover effects whereby enforcement action against an identified non-complier seems to increase compliance rates in nearby households.

of punishment posed by the police because it does not incorporate the probability of apprehension and, hence, the punishment that existed for criminal opportunities that were not acted on because the perceived risk of apprehension was deemed too high (Cook, 1979). For example, a would-be robber of a liquor store is unlikely to carry out the robbery if an occupied police car is parked outside. More generally, would-be offenders might be deterred from committing a crime even if the apprehension risk is less than certain but is still judged to be too high because of the overall presence of police or other threats of apprehension. We emphasize the distinction between the probability of punishment for targets that were acted on and the probability of punishment attending targets that were not acted on because the latter are an example of the way a deterrence-based mechanism can prevent crime without actually having to apprehend a perpetrator of a crime to demonstrate the “price of crime.”

This observation serves as a point of departure for illustrating with a concrete, albeit stylized, example of how a deterrence-based policy with an elasticity greater than 1 might reduce both crime and imprisonment. Assume that each individual has a probability of 50% of facing a criminal opportunity. Suppose that in this stylized world would-be criminals will take advantage of all criminal opportunities with a risk of apprehension less than 35% and that two types of criminal opportunities exist—good opportunities from the criminal’s perspective that have a risk of apprehension of 10% and marginal opportunities with a risk of apprehension of 30%. The latter are described as marginal because their attendant risk of apprehension is only just less than the 35% threshold of acceptability. Suppose also that 75% of criminal opportunities are marginal and that 25% are good. In this world, all criminal opportunities are exercised, so the crime rate is 50%. The clearance rate, which is the apprehension rate for crimes actually perpetrated, is 25% ($25\% = 25\% \times 10\% + 75\% \times 30\%$). The imprisonment rate is 12.5% ($12.5\% = 50\% \times 25\%$).

Suppose now that a new police chief introduces innovations in policing (e.g., problem-oriented policing [POP]) that increase the risk of apprehension at both good and marginal opportunities by 50%—from 10% to 15% for the good opportunities and from 30% to 45% at what previously had been marginal opportunities. We use the past tense to describe the marginal opportunities because they would no longer be taken advantage of because their risk of apprehension now exceeds the 35% apprehension risk maximum that criminals will tolerate.

This policing innovation will have the following distinct effects: First, by deterring criminals from taking advantage of what previously had been marginally favorable targets, the crime rate will be reduced from 50% to 12.5%. Second, by limiting criminal activity to the good opportunities, the clearance rate declines from 25% to 15% even though the police, in fact, have become 50% more effective in producing a threat of apprehension. Third, and most important for our purposes here, fewer actual apprehensions will occur not only because of the decline in the rate of apprehension at the criminal targets that actually are acted on (i.e., the good targets) but also because of the 50% decline in the crime rate; together, these two reductions combine to reduce the imprisonment rate under the new

regime to 1.875%. We emphasize that the reduction in prison population is not attributable to the ineffectiveness of the police. To the contrary, their increased effectiveness in deterring crime in the first place decreased the flow of captured criminals into the criminal justice system. This hypothetical case thus illustrates how a policy change, in theory, can reduce crime and imprisonment rates simultaneously.

Do policies with elasticities greater than 1 exist? The following section will assess the empirical evidence on severity and certainty, whereas the last section derives policy conclusions from the empirical literature. Our final section will advance the claim that although evidentiary support does not exist that any particular policy is associated with an elasticity greater than 1, one can identify high and low elasticity policies with confidence. The most likely candidates for policies with high elasticity policies involve the use of police to increase the risk of apprehension, which in turn increases p , whereas it seems that the elasticities with respect to severity are low. However, this result is not the end of the story. These two findings suggest that a change in the current sanction regime toward one with higher certainty and lower severity when combined can reduce both crime and imprisonment even if the certainty policy has an elasticity less than 1; all that is required is that the certainty policy have a larger elasticity than the severity policy.⁷ It is for this reason that we believe the answer to our title question is a tentative “yes.”

Potentially Criminogenic Effect of the Experience of Imprisonment

Our discussion so far has accepted the conventional wisdom that increases in either p or L will decrease the crime rate. The third argument that we make is that good reasons exist to believe that this is not always the case.

In criminology, the term *general deterrence* is used to describe the behavioral response to the threat of punishment, whereas the term *specific deterrence* is used to describe the behavioral response to the experience of punishment. Because the mechanisms underlying general and specific deterrence are conceptually distinct, no inherent contradiction persists in one being operative and the other not. Indeed, as an empirical matter, this might be the case. Evidence of general deterrent effects is strong, whereas little evidence is found of specific deterrent effects. In fact, if anything, the evidence suggests that the experience of imprisonment might have a criminogenic rather than a specific deterrent effect.

The logic of specific deterrence is grounded in the idea that if the experience of imprisonment is sufficiently distasteful, then some of the punished might conclude that it is an experience not to be repeated. The structure of the law itself also might cause previously convicted individuals to revise upward their estimates of the likelihood and severity of punishment for future law breaking. The criminal law commonly prescribes more severe penalties for recidivists. For example, sentencing guidelines routinely dictate longer prison

7. Note that we are not arguing that the change meets a cost–benefit test because we do not address the relative costs of severity and certainty policies.

sentences for individuals with prior convictions. Prosecutors also might be more likely to prosecute individuals with criminal histories. Additionally, the experience of punishment might affect the likelihood of future crime by decreasing the attractiveness of crime itself or by expanding alternatives to crime. While imprisoned, the individual might benefit from educational or vocational training that increases postrelease non-criminal income-earning opportunities (MacKenzie, 2002). Other types of rehabilitation are designed to increase the capacity for self-restraint when confronted with situations, like a confrontation, that might provoke a criminal act such as violence (Cullen, 2002).

However, several reasons exist for theorizing that the experience of punishment might increase an individual's future proclivity for crime. One argument relates to the effect of the experience of crime on expectations about the prison experience. Although some individuals might conclude that imprisonment is not an experience to be repeated, others might conclude that the experience was not as adverse as anticipated. Other reasons have to do with the social interactions induced by imprisonment. Prisons might be "schools for crime" where inmates learn new crime skills even as their non-crime human capital depreciates. Associating with other more experienced inmates could lead new inmates to adopt the older inmate's deviant value systems or enable them to learn "the tricks of the trade" (Hawkins, 1976; Steffensmeier and Ulmer, 2005). Being punished also might elevate an offender's feelings of resentment against society (Sherman, 1993) or might strengthen the offender's deviant identity (Matsueda, 1992).

The experience of imprisonment also might increase future criminality by stigmatizing the individual socially and economically. Much of the evidence shows that an important part of the deterrent effect of legal sanctions stems from the expected societal reactions set off by the imposition of legal sanctions (Nagin and Paternoster, 1994; Nagin and Pogarsky, 2003; Williams and Hawkins, 1986). Prior research has found that individuals who have higher stakes in conformity are more reluctant to offend when they risk being exposed publicly (Klepper and Nagin, 1989a). Although the fear of arrest and stigmatization might deter potential offenders from breaking the law, those that have suffered legal sanctions might find that conventional developmental routes are blocked. In their work on the 500 Boston delinquents initially studied by Glueck and Glueck (1950), Sampson and Laub (1993) called attention to the role of legal sanctions in what they called the process of cumulative disadvantage. Official labeling through legal sanctions might cause an offender to become marginalized from conventionally structured opportunities, which in turn increases the likelihood of subsequent offending (Bernburg and Krohn, 2003). Sampson and Laub (1993) proposed that legal sanctions might amplify a "snowball" effect that increasingly "mortgages" the offender's future by reducing conventional opportunities. Several empirical studies support the theory that legal sanctions downgrade conventional attainment (Freeman, 1996; Nagin and Waldfogel, 1995, 1998; Sampson and Laub, 1993; Waldfogel, 1994; Western, 2002; Western, Kling, and Weiman, 2001) and increase future offending (Bernburg and Krohn, 2003; Hagan and Palloni, 1990).

A recent review of the literature on imprisonment and reoffending by Nagin et al. (in press) concluded that on balance the research findings pointed more to a criminogenic effect than to a preventive effect. Specifically, most studies find higher recidivism rates among individuals receiving custodial sentences regardless of sentence length than among individuals receiving non-custodial sentences even with extensive statistical controls for potentially confounding factors. They also report that evidence on the relationship between sentence length and recidivism is mixed. If the fact of imprisonment as opposed to the length of imprisonment is the relevant source of higher recidivism, then this fact would suggest an even more radical policy change than we propose, namely that criminal sanctions other than imprisonment should be used. We do not pursue this line of argument here.

From a theoretical perspective, the potentially criminogenic effect of the experience of imprisonment might serve as an additional deterrent to sufficiently farsighted would-be criminals. Although the large body of evidence on the present orientation of offenders leaves us skeptical that on the margin this additional source of deterrence is large, the point still stands that if the prison experience is criminogenic when deterrence fails, then ex-prisoners will be more, not less, crime prone because of their prison experience. Thus, sanction policies that reduce both crime and imprisonment might have the added benefit of averting the potentially criminogenic influence of the experience of imprisonment.

It is important to emphasize that the existing literature suggesting a criminogenic effect to prison is far from decisive. The literature has yet to be subjected to the sort of careful identification analysis that one observes, for example, in the study of social interaction effects. Blume, Brock, Durlauf, and Ioannides (2010) provided an extensive discussion of identification problems in social interactions; we believe it is fair to say that the literature on peer effects in prisons, for example, generally has not been subjected to a rigorous evaluation of the conditions studied by Blume et al., which can produce spurious evidence of social influences. Hence, our claim is that criminogenic effects are theoretically plausible and are consistent with several empirical studies.

Empirics

In this section, we discuss the evidentiary support for our claims, focusing on the more recent literature that largely began emerging in the 1990s.⁸ We consider this literature in two stages. First, we consider aggregate regressions studies. These studies come in two forms. One form examines the relationship between aggregate imprisonment rates and aggregate crime rates, and the other form examines the relationship between crime rates and aggregate

8. The first wave of deterrence research that involved a substantial number of studies was conducted in the 1960s and 1970s. These studies suffered from numerous statistical flaws that are detailed in Blumstein, Cohen, and Nagin (1978). In our judgment, these flaws are so serious that this wave of research does not contain any empirical findings that might be used for formulating policy.

measures of police level, measured, for example, by per capita public expenditures on police. The level of aggregation for the imprisonment and crime studies is typically states, whereas the level of aggregation for police and crime studies is usually cities. We conclude that studies of the relationship of imprisonment rates to crime rates are deeply flawed for both statistical and theoretical reasons. Our conclusion about the usefulness of the aggregate regression literature on policing is less negative but still circumspect. We then consider studies that examine the deterrent effect of specific policies or interventions. It is this literature that most influenced our policy claims. Readers who are not interested in the technical reasons for our reservations about the aggregate regression studies might wish to move directly to the section titled Severity-Enhancing Policies.

Aggregate Imprisonment and Crime Studies

A large literature exists that studies the relationship between aggregate imprisonment and crime rates. To provide a general assessment, we follow a recent important review by Donohue (2009: Table 9.1) that identifies six major published journal articles that examine the relationship between aggregate crime rates and imprisonment rates. Each of these studies finds a statistically significant negative association between imprisonment rates and crime rates, and each has been interpreted as implying that higher imprisonment rates result in lower crime rates. These studies would seem to represent a *prima facie* case against our view that it is possible to reduce imprisonment and crime simultaneously.

In fact, these studies should not be interpreted this way. A detailed critique of these studies appears in Durlauf and Nagin (in press); here, we highlight the main problems.

The first and perhaps most important problem with aggregate incarceration/imprisonment studies is that they fail to evaluate how alternative policies jointly affect crime and imprisonment. As such, the studies are not policy relevant. These studies generally ignore three points emphasized in the previous section. The first is that the prison population is an outcome of the overall sanction policy; the population is not a policy variable *per se*. Changes in the size of prison populations only can be achieved by changing policies that we have summarized through the certainty of punishment p and the severity of punishment L . Second, in choice-based theories of criminal behavior, the deterrence response to policy changes affecting either p or L generally will not be uniform and, instead, will depend on, among a range of factors, the current values of these variables. This heterogeneity in deterrent effects forms the basis for a third point emphasized in the previous section: A logically necessary inverse relationship does not exist between the imprisonment rate and the crime rate. Depending on the magnitude of the deterrence response evoked by a sanction policy, a declining crime rate might be associated with either a declining or an increasing imprisonment rate. Together, these three points illustrate the general idea that aggregate crime rate and aggregate imprisonment rates are equilibrium outcomes, so their relationship will depend on the way that the individual and the institutional factors that determine outcomes on an individual level aggregate across a population.

The exception to our broad claim that imprisonment/crime regressions are not policy relevant is Levitt (1996), which is the one aggregate crime/imprisonment study in Donohue's (2009) survey with a methodological approach that we endorse. This study is based on studying the effects of court orders requiring reductions in prison populations as an instrument, reasoning that such orders will cause a reduction in the imprisonment rate that is unrelated to the endogeneity of the imprisonment rate. He found that a prisoner reduction precipitated by a court order can lead to a short-term increase in the crime rate. Levitt's analysis, however, speaks to a different policy question than ours, namely the effect of court orders. In Durlauf and Nagin (in press), we discussed why his findings are not informative about the effect on the crime and imprisonment rates of a change in the certainty and severity of sanctions.

A second general problem with the imprisonment and crime literature follows from our argument that each is an equilibrium outcome, namely that the existing literature does not admit a causal interpretation between the variables under study. As discussed in the section titled *The Interrelationship of the Crime and Imprisonment Rates*, crime rates affect imprisonment rates even as imprisonment rates might be affecting crime rates. Statistically disentangling cause-and-effect relationships in this setting is challenging, and these studies suffer from basic limitations in establishing causal claims. One problem in many of these studies is the confusion of the word *causality* as is understood in an econometric sense (and involves the marginal predictive value of one variable with respect to another) with the "causality" in a substantive social-science sense, which involves manipulations of one variable in the context of a model of behavior. Four of the six analyses studied by Donohue (2009)⁹ are based on the application of time-series analyses that in essence look for dynamic correlations between the levels of crime rates and imprisonment rates (or for changes in the two series). Any claim that these correlations imply a counterfactual-based causal relationship between imprisonment rates and crime rates has been recognized for a long time to be invalid. The fact that levels or changes in one variable help to predict additional levels or changes in another variable does not imply causality as the term is understood in social science. One obvious reason is that a third factor might be influencing each. A less obvious issue, known as the Lucas critique in economics (see Ljungqvist, 2008 for an introduction), is that the dynamic equilibrium statistical relationships between variables such as incarceration rates and crime rates are a function of the "structural" determinants of the sanction regime, such as the menu of potential penalties for a given crime, the rules by which police resources are employed, and so on.

The problem of spurious claims of causality from correlation also apply to Levitt (1996) and Spelman (2005), which are the two studies in Donohue's (2009) survey that

9. The studies are Marvell and Moody (1994), Becsi (1999), Spelman (2000), and Liedka et al. (2006). Spelman (2008) is the state of the art in time-series analyses of imprisonment and crime. Although the study explores important issues of model specification, it also suffers from the criticisms we have made.

use instrumental variable analysis to address simultaneity bias. With respect to Levitt (1996), Liedka et al. (2006) argued that prison-overcrowding litigation is a function of the incarceration rate; hence, both could move positively as a result of a common factor. In Durlauf and Nagin (in press), we questioned whether this critique is particularly compelling in the absence of information on the political economy of overcrowding litigation. Spelman (2005), focusing on counties in Texas, regressed changes in county-specific crime rates against changes in public order, arrest and incarceration rates, and some set of controls. The arrest and incarceration rates then are instrumented using lagged values of variables such as police resources, republican voting, and jail capacity. No explanation is given as to why these instruments are valid (i.e., why they should not appear in the original crime regression). This issue is not an idle quibble. The error in a crime rate/incarceration rate regression is made up of every crime determinant that is omitted from the regression, which includes unmodeled dependence in the crime rate process. Republican voting, for example, is informative about values, which presumably directly affect individual crime choices. Instrumental variables are difficult to justify in a crime regression in which the determinants of crime are undertheorized. We consider the problem of reverse causality more serious for Spelman than for Levitt because Levitt uses such a narrowly defined instrument so that it is easier to think about its determinants (and so make a case for validity) as opposed to the ad hoc collection of instruments found in Spelman.

Third, basic statistical problems are found in these studies. Each study employs linear functional forms that do not represent aggregations of individual decisions except under special cases (see Durlauf, Navarro, and Rivers, 2008, in press, for discussion). These studies also fail to evaluate systematically the effects of assumptions about model specification on their findings. As delineated in Durlauf and Nagin (in press), these assumptions include the choice of which control variables to include in the crime model and the choice of the degree of parameter heterogeneity that is allowed across geographic units. These choices are known to matter in other contexts. These issues are examples of the problem of model uncertainty; the qualitative questions that one wishes to study, such as the imprisonment/crime relationship, do not provide guidance on the statistical model to employ. This reason is well known as to why different articles come to opposing conclusions using the same data set.

Aggregate Studies of Crime Rates and Police Levels

The companion literature to the imprisonment and crime literature examines the relationship between resources committed to policing and crime rates. Studies include Corman and Mocan (2000), Evans and Owens (2007), Levitt (1997, 2002), Marvell and Moody (1994), as well as McCrary (2002). With the exception of McCrary (2002), these studies consistently found evidence that larger resource commitments to policing are associated with lower crime rates. Even for this exception, Levitt (2002) effectively argued that McCrary's findings did not overturn Levitt's general claim of police effectiveness.

The aggregate policing and imprisonment literatures share common features. Both rely on panel data sets tracking crime rates in heterogeneous locations over time—states for the imprisonment literature and cities for the police literature. Both also use similar econometric methods. As such, these studies are subject to many of the same criticisms that we have raised for incarceration and crime regressions. At the same time, the import of our criticisms is less severe in some respects. Unlike the imprisonment regressions, all studies reviewed in Durlauf and Nagin (in press) that employ aggregate police regressions address the following meaningful policy question: Does the level of resource commitment to policing affect crime rates?¹⁰ Changes in the number of police or expenditures on police is subject to policy choice in a way that the imprisonment rate is not. Furthermore, Granger causality receives less emphasis in the police regressions literature than in the imprisonment literature, so although Marvell and Moody (1994) explicitly used Granger causality notions, whereas Corman and Mocan (2000) did so implicitly, neither Levitt (1997, 2002) nor Evans and Owens (2007) fell into the misinterpretation of marginal time-series predictive power as evidence of causality in a counterfactual sense. Read in isolation, our conclusion is that the evidentiary strength of aggregate police/crime studies is limited by inadequate attention to model uncertainty and to aggregation but not by asking an ill-posed question.

This criticism is far less damning than the absence of a well-posed policy question, which in our view places the imprisonment/crime literature in a different class than the police/crime literature. Given the statistical problems and the absence of a well-posed policy question that plague aggregate imprisonment/crime regressions, the statistical limitations of aggregate police/crime studies, and the nonexistence of any aggregate severity/crime studies, the evidentiary support for our general policy claims necessarily is limited if one is restricted to these studies. Simply put, the most favorable interpretation of the aggregate regression evidence is that some reason exists to believe that increased policing reduces crime. But this, by itself, does not imply that a shift from severity to certainty will be efficient. Fortunately, direct and strong evidence with respect to severity and certainty effects can be found in targeted studies of particular policy changes, which we describe in the next section.

Severity-Enhancing Policies

Surprisingly few studies use specific policy changes to evaluate the deterrent effect of changes in severity. The earliest post-1970s attempts to measure severity effects analyzed the deterrent impact of sentence enhancement for gun crimes. A series of studies (Loftin, Heumann, and McDowell, 1983; Loftin and McDowell, 1981, 1984) examined whether sentence enhancements for gun use in committing another type of crime such as robbery

10. To be fair, the way in which police resources are employed (e.g., more police vs. higher salaries) might be determined by the crime rate, political economy, and so on so that the comparison of particular measures of police activity are not necessarily strictly exogenous policy interventions; hence, the difference between aggregate police/crime regressions and aggregate imprisonment/crime regressions is not as black and white as we have described. We thank Richard Rosenfeld for raising this point.

deter gun use in the commission of crime. Although the findings are mixed, this body of research generally has failed to uncover evidence of a deterrent effect (but see McDowall, Loftin, and Wiersema, 1992).¹¹ One important caveat is found with respect to extrapolating these studies to understanding the link between deterrence and severity. The same literature that found that gun penalty enhancements were ineffective also found that these laws generally failed to increase the sentences actually received in gun-related crime prosecutions. Thus, gun-using criminals might not have responded because the real incentives were not changed.

Numerous studies have examined the deterrent effect of California's "Three Strikes and You're Out" law, which mandated a minimum sentence of 25 years after conviction for a third strike-eligible offense. Zimring, Hawkings, and Kamin (2001) concluded that the law reduced the felony crime rate by at most 2%, finding that only those individuals with two strike-eligible offenses showed any indication of reduced offending. Other studies by Stolzenberg and D'Alessio (1997) and by Greenwood and Hawken (2002) also examined before-and-after trends and found similarly little evidence of crime-prevention effects. These studies did not conduct a cost-benefit analysis of the trade-off between the benefits of this crime reduction and the attendant increases, which limits the policy relevance of their findings because the notion of a small effect is not compared with the cost of the policy.

In our judgment, the most persuasive study of the three strikes law is by Helland and Tabarrok (2007), who studied both the effects of the law on crime as well as assessed its cost effectiveness. This analysis focuses exclusively on whether the law deterred offending among individuals previously convicted of strike-eligible offenses. Helland and Tabarrok compared the future offending of individuals convicted of two previous strike-eligible offenses with that of individuals who had been convicted of only one strike-eligible offense but who, in addition, had been tried for a second strike-eligible offense and ultimately were convicted of a non-strike-eligible offense. The study demonstrated that these two groups of individuals were comparable on many characteristics such as age, race, and time in prison. Even so, it found that arrest rates were approximately 20% lower for the group with convictions for two strike-eligible offenses. The authors attributed this reduction to the greatly enhanced sentence that would have accompanied conviction for a third strike-eligible offense.

As is standard in studies of this type, the interpretation of the findings in terms of the marginal deterrence effects of the three strikes law is contingent on the comparability of two

11. McDowall et al. (1992) combined data from the different locations they had studied previously for evidence of a deterrent effect of sentence enhancements. Although none of the individual site analyses produced evidence of a deterrent effect, the combined analysis did. For several reasons, we are skeptical of the combined analysis. First, it is vulnerable to many criticisms we have leveled at aggregate regression analyses. Second, their finding that at the individual sites the laws were ineffective in increasing sentence length suggests that the null findings at the individual sites were not a result of a lack of statistical power that might be remedied by combining data across sites. Third, the approaches taken to combining the studies contain numerous ad hoc assumptions that raise separate concerns about whether their findings are robust.

groups who are under study. Some reasons are available as to why unobserved individual differences might be present; for example, those individuals who were convicted of a second non-strike-eligible offense might have had better legal representation than those that were convicted of a second strike-eligible offense. In such a case, the incentives for additional crime commission might differ for reasons outside the penalty differential. Another reason for non-comparability might be that those convicted of a non-strike-eligible offense are simply better criminals than those convicted of a strike-eligible offense in the sense that they are better able to generate alibis, avoid leaving evidence, and so on. Our own view is that the concerns raised by these potential sources of unobserved heterogeneity are sufficiently speculative that we find the Helland and Tabarrok (2007) results persuasive. Helland and Tabarrok also conducted a cost-benefit analysis and concluded that the crime-reduction benefits likely fall far short of the aggregate cost of the increase in imprisonment induced by the law. They go on to argue that a financially comparable investment in policing that primarily affects the certainty of punishment are likely to yield far larger crime-reduction benefits. We return to this observation in the following discussion.¹²

Other sentence enhancement policies also have been examined to uncover possible deterrence effects. Kessler and Levitt (1999) examined the deterrent impact of another California sentence enhancement law—Proposition 8 passed in 1982. Proposition 8 anticipates the “three strikes” laws passed by many states in the 1990s. Their aim was to distinguish the deterrent effects from the incapacitation effects. Most state criminal statutes provide for a sentence enhancement for repeat offenders. Proposition 8 increased the severity and scope of those enhancements and mandated their application. For example, before Proposition 8, sentence enhancements pertained to persons with prior imprisonments, whereas after Proposition 8, enhancements were widened to pertain to prior convictions and were lengthened. Kessler and Levitt (1999) argued that before the enactment of Proposition 8, repeat offenders covered by the Proposition still were sentenced to prison, just not for as long. Thus, any short-term drop in crime rate should be attributed to deterrence rather than to incapacitation. They estimated a 4% decline in crime attributable to deterrence in the first year after enactment. Within 5 to 7 years, the effect grew to a 20% reduction. The longer term estimate includes incapacitation effects. Indeed, Kessler and Levitt acknowledged that the incapacitation effect might dominate the deterrent effect.

Webster, Doob, and Zimring (2006) challenged the basic finding of any preventive effects. Kessler and Levitt (1999) examined data from every other year. When all annual data are used, Webster et al. (2006) found that the decline in crime rates in the affected categories began before Proposition 8's enactment, and the slope of this trend remained

12. Shepherd (2002) also found crime-prevention effects for California's three strikes law, mostly from a reduction in burglaries. The aim of the analysis was to estimate the total deterrent effect of the law as reflected in the article's title: “Fear of the First Strike. . .” The validity of the findings are difficult to judge because the statistical analysis rests on many questionable assumptions (e.g., that police and court expenditures are independent of the crime rate).

constant through implementation. But see Levitt (2006) for a response and commentary supportive of Webster et al. by Raphael (2006). Our assessment of the debate is that the evidence in Kessler and Levitt on deterrence is relatively weak as a result of issues concerning the comparability of the crime series used by Kessler and Levitt to uncover the effect of Proposition 8 via contrasts with the crime series for the Proposition 8 crimes but not for other reasons that have been alleged.¹³

A different class of studies tries to uncover deterrent effects by studying the effects of differences in punishment severity for minors versus adults. For most crimes, the certainty and severity of punishment increase discontinuously after reaching the age of majority when the jurisdictional authority for criminal wrongdoing shifts from the juvenile to the adult court. In an extraordinarily careful analysis of individual-level crime histories from Florida, Lee and McCrary (2009) attempted to identify a discontinuous decline in the hazard of offending at age 18—the age of majority in Florida. Their point estimate of the discontinuous change is negative as predicted but is minute in magnitude and not even remotely close to achieving statistical significance. Similarly, Hjalmarsson (2009) found no evidence of reduced offending when juveniles reach the age of majority, but interestingly, the study did find evidence that perceptions of the risk of imprisonment increase.

The finding that the young fail to respond to changes in penalties associated with the age of majority is not uniform across studies. An earlier analysis by Levitt (1998) found a large drop in the offending of young adults after they reached the age of jurisdiction for the adult courts. For several reasons, we judge the null effect finding of Lee and McCrary (2009) more persuasive in terms of understanding deterrence. First, Levitt (1998) focused on differences in age measured at annual frequencies, whereas Lee and McCrary measured age in days or weeks. At annual frequencies, the estimated effect is more likely to reflect both deterrence and incapacitation; hence, Levitt's results might be driven by incapacitation effects rather than by deterrence per se. Second, the Lee and McCrary analysis is based on individual-level data and avoids problems that can result because of aggregation (Durlauf et al., 2008, in press). On its own terms, the individual-level data studied by Lee and McCrary are unusually informative because they also contain information on the exact age

13. Levitt (2006) responded to Webster et al. (2006) by arguing that they failed to estimate the same model that he analyzed with Kessler. Specifically, Kessler and Levitt (1999) compared changes in crime rates before and after Proposition 8 for crimes affected by the proposition with changes before and after the Proposition in other crime rates in California and compared the Proposition 8-affected crime rates for the same crime rates outside of California. As such, Levitt, in our view, correctly faulted Webster et al. (2006), who focused on changes in the crime rates for the Proposition 8 crimes but not as compared with changes in others, which is the appropriate strategy. However, Raphael (2006) called into question the validity of the comparison groups used by Kessler and Levitt. Webster et al. also raised this issue. In his response, Levitt fairly noted that it is a matter of judgment and questioned whether Webster et al. have shown that it matters in the examples they raise. In our view, Raphael's criticism of comparability, when combined with the Webster et al. versus Levitt exchange, is persuasive in calling into question the Kessler and Levitt conclusions on the effects of Proposition 8.

of arrestees, which allows for the calculation of short-term effects of the discontinuity in sentence severity (e.g., effects within 30 days of turning 18).

In summary, the literature on whether increases in prison sentence length serves as a deterrent is not large, but several persuasive studies do exist. These studies suggest that increases in the severity of punishment have at best only a modest deterrent effect. We reiterate, however, the point emphasized in the section titled *The Interplay of Certainty and Severity in Producing Deterrence* that this conclusion concerns changes in the severity at margin. In this regard, it is important to note that most research on sentence length involve increases in already long sentences. Some evidence suggests that Massachusetts's Bartley–Fox gun law mandating a 1-year prison sentence for unlawful carrying of gun might have been a deterrent (Wellford, Pepper, and Petrie, 2005). Furthermore, we subsequently discuss experiments showing short but certain incarceration deters. We thus see a need for research on the likely non-linear relationship between deterrence and severity. But for our purposes, it seems that the marginal deterrent value of increased sentence length at current levels is small for contexts in which sentences are currently long.

Certainty-Based Policies

Studies of certainty-enhancing policies typically focus on the deterrent effect of the police. Relatively little research is available on the deterrent effect stemming from the certainty of prosecution or sentencing to prison conditional on apprehension. So although much is known about how one of the primary determinants of certainty affects crime via specific policies, the effects of changes in policy with respect to the other primary actors, prosecutors, and judges have yet to be examined.¹⁴

The police might prevent crime through many possible mechanisms. Apprehension of active offenders is a necessary first step for their conviction and punishment. If the sanction involves imprisonment, then crime might be prevented by the incapacitation of the apprehended offender. The apprehension of active offenders also might deter would-be criminals by increasing their perception of the risk of apprehension and thereby the certainty of punishment. Many police tactics such as rapid response to calls for service at crime scenes or after crime investigation are intended not only to capture the offender but also to deter others by projecting a tangible threat of apprehension. However, as emphasized in the section titled *The Interrelationship of the Crime and Imprisonment Rates*, police might deter without actually apprehending criminals because their presence projects a threat of apprehension if a crime were to be committed.

14. Several studies conducted in the 1970s examined the deterrent effect of conviction risk, usually measured by the ratio of convictions to charges (Avio and Clark, 1974; Carr-Hill and Stern, 1973; Sjoquist, 1973). These studies suffered several important methodological limitations; most importantly, they all treated conviction risk as exogenous.

Some of the most compelling evidence of deterrence because of police involves instances in which a complete or near-complete collapse of police presence occurs. In September 1944, German soldiers occupying Denmark arrested the entire Danish police force. According to Andeneas (1974), crime rates rose immediately but not uniformly. The frequency of street crimes like robbery, whose control depends heavily on visible police presence, rose sharply. By contrast, crimes such as fraud were less affected. See Sherman and Eck (2002) for other examples of crime increases after a collapse of police presence.

From a policy perspective, the important question is not whether the complete or near-complete absence of police will result in a large crime increase. Instead, what is interesting and important is whether marginal changes in police presence or different approaches to mobilizing police can affect crimes rates. Research on the marginal deterrent effect of specific police policies has taken two distinct directions. One set of studies examines the effects of abrupt changes in police presence. A second research program has focused on the crime-prevention effectiveness of different strategies for deploying police. We review these literatures separately.

Several targeted studies have involved changes in police presence as a result of local political and social conditions. Such studies have examined the Cincinnati Police Department (Shi, 2009), the New Jersey State Police (Heaton, in press), and the Oregon State Police (DeAngelo and Hansen, 2008). Each of these studies concludes that increases (decreases) in police presence and activity substantially decrease (increase) crime. By way of example, Shi (2009) studied the fallout from an incident in Cincinnati in which a White police officer shot and killed an unarmed African American suspect. The incident was followed by 3 days of rioting, heavy media attention, the filing of a class action lawsuit, a federal civil rights investigation, and the indictment of the officer in question. These events created an unofficial incentive for officers from the Cincinnati Police Department to curtail their use of arrest for misdemeanor crimes, especially in communities with larger proportional representation of African Americans out of concern for allegations of racial profiling. Shi demonstrated measurable declines in police productivity in the aftermath of the riot and documented a substantial increase in criminal activity. The estimated elasticities of crime to policing based on her approach were $-.5$ for violent crime and $-.3$ for property crime.

The ongoing threat of terrorism also has provided several unique opportunities to study the impact of police resource allocation in cities around the world, including the District of Columbia (Klick and Tabarrok, 2005), Buenos Aires (Di Tella and Schargrotsky, 2004), Stockholm (Poutvaara and Priks, 2006), and London (Draca, Machin, and Witt, 2008). The Klick and Tabarrok (2005) study examined the effect on crime of the color-coded alert system devised by the U.S. Department of Homeland Security in the aftermath of the September 11, 2001 terrorist attack to denote the terrorism threat level. The alert system's purpose was to signal federal, state, and local law enforcement agencies to occasions when it might be prudent to divert resources to sensitive locations. Klick and Tabarrok (2005)

is especially interesting because of its use of daily police reports of crime for the period of March 2002 to July 2003, during which time the terrorism alert level rose from “elevated” (yellow) to “high” (orange) and back down to “elevated” on four occasions. During high alerts, anecdotal evidence suggested that police presence increased by 50%. Their estimate of the elasticity of total crime to changes in police presence as the alert level rose and fell was -0.3 .

These police manpower studies mainly speak only to the number and allocation of police officers and not to what police officers actually do on the street beyond making arrests. So, in this sense, they are something of a black box. We now turn to the question of how police are used. Much research has examined the crime-prevention effectiveness of alternative strategies for deploying police resources. This research has been conducted mostly by criminologists and sociologists. Among this group of researchers, the preferred research designs are quasi-experiments involving before-and-after studies of the effect of targeted interventions as well as true randomized experiments. The discussion that follows draws heavily on two excellent reviews of this research by Weisburd and Eck (2004) and by Braga (2008). As a preface to this summary, we draw the theoretical link between the police deployment and the certainty and severity of punishment. For the most part, deployment strategies affect the certainty of punishment through its impact on the probability of apprehension. However, notable examples are available in which severity also might be affected.

One way to increase apprehension risk is to employ police in a fashion that increases the probability that an offender is arrested after committing a crime. Studies of the effect of rapid response to calls for service (Kansas City Police Department, 1977; Spelman and Brown, 1981) found no evidence of a crime-prevention effect, but this outcome might be because most calls for service occur well after the crime event with the result that the perpetrator has fled the scene. Thus, it is doubtful that rapid response materially affects apprehension risk. Similarly, because most arrests result from the presence of witnesses or physical evidence, the general view of the criminology literature is that improvements in investigations beyond conventional canvassing for witnesses and collecting on-site physical evidence are not likely to yield material deterrent effects because, again, apprehension risk is not likely to be affected (National Research Council, 2004).

An alternative way to alter police employment after a crime is to change an officer's discretion as to whether to arrest a wrongdoer. A series of randomized experiments were conducted to test the deterrent effect of rules implementing mandatory arrest for domestic violence. The initial experiment conducted in Minneapolis by Sherman and Berk (1984) found that mandatory arrest rules were effective in reducing domestic violence reoffending. Findings from follow-up replication studies (as part of the so-called Spouse Assault Replication Program, or SARP) were inconsistent. Experiments in two cities found a deterrent effect, but no such effect was found in three other cities (Maxwell, Garner, and Fagan, 2002). Berk, Campbell, Klap, and Western (1992) found that the response to arrest

in the SARP data differed across social background. Higher status individuals seemed to be deterred by arrest, whereas the assaultive behavior of lower status individuals seemed to be elevated. The heterogeneity in responses at both the citywide and the socioeconomic level is important because it illustrates a more general point; the response to sanction threats need not be uniform across or within the populations. Sherman (1993) proposed a theoretical explanation called defiance theory to explain the status-based heterogeneity in response to mandatory arrest. We are not aware of any theoretical explanation of the heterogeneity in cross-city effectiveness.

The second source of deterrence from police activities involves averting crime in the first place. In this circumstance, no apprehension takes place because no offense occurred. Thus, as discussed in the section titled Key Concepts, measures of apprehension risk based only on enforcement actions and crimes that actually occur, such as arrests per reported crime, are seriously incomplete because such measures do not capture the apprehension risk that attends criminal opportunities that were not acted on by potential offenders because the risk was deemed too high.

Cohen and Ludwig (2003) studied an example of a policing tactic deployed by the Pittsburgh Police Department that was designed to avert gun crimes from occurring in the first place. The tactic involved assigning additional police resources to selected high-crime communities within the city. These patrols were relieved from responding to citizen requests for service (911 calls) to work proactively to search for illegally carried guns. Police contacts were initiated mainly through traffic stops and “stop-and-talk” activities with pedestrians in public areas. Carrying open alcohol containers in public and traffic violations were frequent reasons for initiating contact. These targeted patrols were directed to two of Pittsburgh’s five police zones that had unusually high crime rates. Cohen and Ludwig found that this heightened enforcement activity was associated with significant declines in shots fired and assault-related gunshot injuries.

Two other examples of police deployment strategies that have been shown to be effective in averting crime in the first place are “hot spots” policing and POP. Weisburd and Eck (2004) proposed a two-dimensional taxonomy of policing strategies. One dimension is “level of focus,” and the other is “diversity of focus.” Level of focus represents the degree to which police activities are targeted. Targeting can occur in a variety of ways, but Weisburd and Eck gave special attention to policing strategies that target police resources in small geographic areas (e.g., blocks or specific addresses) that have high levels of criminal activity—so-called crime hot spots.

The idea of hot spots policing stems from a striking empirical regularity uncovered by Sherman, Gartin, and Buerger (1989). Sherman et al. found that only 3% of addresses and intersections (“places,” as they were called) in Minneapolis produced 50% of all calls to the police. Weisburd and Green (1995) found that 20% of all disorder crime and 14% of crimes against persons in Jersey City, New Jersey, originated from 56 drug crime hot spots. In a later study in Seattle, Washington, Weisburd and Eck (2004) reported that between 4% and 5%

of street segments in the city accounted for 50% of crime incidents for each year during a 14-year period. Other more recent studies finding comparable crime concentrations include Brantingham and Brantingham (1999), Eck, Gersh, and Taylor (2000), as well as Roncek (2000). Just like in the liquor store example, the rationale for concentrating police in crime hot spots is to create a prohibitively high risk of apprehension and thereby to deter crime at the hot spot in the first place.

The first test of the efficacy of concentrating police resources on crime hot spots was conducted by Sherman and Weisburd (1995). In this randomized experiment, hot spots in the experimental group were subjected to, on average, a doubling of police patrol intensity compared with hot spots in the control group. Declines in total crime calls ranged from 6% to 13%. In another randomized experiment, Weisburd and Green (1995) found that hot spots policing was similarly effective in suppressing drug markets, and Weisburd et al. (2006) found no evidence that hot spots policing simply displaced crime to nearby locations.

Braga's (2008) informative review of hot spots policing summarized the findings from nine experimental or quasi-experimental evaluations. The studies were conducted in five large U.S. cities and in one suburb of Australia. Crime-incident reports and citizen calls for service were used to evaluate impacts in and around the geographic area of the crime hot spot. The targets of the police actions varied. Some hot spots were generally high-crime locations, whereas others were characterized by specific crime problems like drug trafficking. All but two studies found evidence of significant reductions in crime. Furthermore, no evidence was found of material crime displacement to immediately surrounding locations. On the contrary, some studies found evidence of crime reductions, not increases, in the surrounding locations—a "diffusion of crime-control benefits" (Weisburd et al., 2006: 549) to non-targeted locales. We also note that the findings from the previously described econometric studies of focused police actions (e.g., in response to terror alert level) buttress the conclusion from the hot spots literature that the strategic targeting of police resources can be effective in reducing crime.

The second dimension of the Weisburd and Eck (2004) taxonomy is diversity of approaches. This dimension concerns the variety of approaches that police use to affect public safety. Low diversity is associated with reliance on time-honored law enforcement strategies for affecting the threat of apprehension (e.g., by dramatically increasing police presence). High diversity involves expanding beyond conventional practice to prevent crime. One example of a high-diversity approach is POP, which comes in so many different forms that (like pornography) it is regrettably hard to define, but the essence of POP is devising strategies for increasing the apprehension risk or for reducing criminal opportunities that are tailored to address the crime problem at a specific location (e.g., open-air drug market) or a specific type of activity (e.g., adolescents being victimized coming and going from school).

Weisburd, Telep, Hinkle, and Eck (2010) conducted a review of the POP evaluations and reported overwhelming support for its effectiveness. Although most evaluations are of low quality—little more than before-and-after studies—they identified ten studies with credible designs (i.e., randomized experiments or quasi-experiments with credible control comparisons). Eight of the ten studies reported statistically significant reductions in crime. Koper and Mayo-Wilson (2006) reviewed the evidence on the effectiveness of police crackdowns on illegal gun carrying and reported consistent evidence of the effectiveness of these efforts in reducing gun crime.

These findings are notable for our purposes. First, effect sizes vary considerably across interventions, which is a finding that reinforces our argument that police-related deterrent effects are heterogeneous; they depend on how the police are used and the circumstances in which they are used. A second and related point is that two interventions involved monitoring of probationers to avert probation revocation resulting from reoffending or from a violation of conditions of parole. This highlights the point that the police can be used effectively to deter crime not only at high-risk locations but also among high-risk individuals.

The observation that police can be used to affect the criminality of a high-risk individual brings us to another relevant literature—field interventions in which sanctions are focused specifically on high-risk groups. Like POP tactics, all interventions are multifaceted, but deterrence-based tactics are a core feature of each. In all cases, the deterrence component of the intervention involved an attempt to make sanction risk certain and salient to a selected high-risk group. In our judgment, these interventions deserve special attention because they provide a useful perspective on the promise and uncertainties of such focused deterrence-based interventions.

We begin by summarizing the findings of an underappreciated randomized experiment by Weisburd, Einat, and Kowalski (2008) that tested alternative strategies for incentivizing the payment of court-ordered fines. The most salient finding involves the “miracle of the cells,” namely, that the imminent threat of incarceration is a powerful incentive for paying delinquent fines. The common feature of treatment conditions involving incarceration was a high certainty of imprisonment for failure to pay the fine. However, the fact that Weisburd et al. labeled the response the “miracle of the cells” and not the “miracle of certainty” is telling. Their choice of label is a reminder that certainty must result in a distasteful consequence, namely incarceration in this experiment, for it to be a deterrent. The consequences need not be draconian, just sufficiently costly to deter proscribed behavior.

The deterrence strategy of certain but non-draconian sanctions has been applied with apparently great success in Project Hope, an intervention heralded in Kleiman (2009), Hawken and Kleiman (2009), and Hawken (2010). Project Hope is a Hawaii-based probation enforcement program. In a randomized experiment, probationers assigned to Project Hope had much lower rates of positive drug tests, missed appointments, and most importantly, were significantly less likely to be arrested and imprisoned. The cornerstone

of the Hope intervention was regular drug testing, including random tests, and certain but short punishment periods of confinement (i.e., 1–2 days) for positive drug tests or other violations of conditions of probation. Thus, both the Weisburd et al. (2008) fine experiment and Project Hope show that highly certain punishment can be an effective deterrent to those for whom deterrence previously has been ineffective in averting crime.

The strategy of certain punishment is also a centerpiece of field interventions in Boston, Richmond, and Chicago that are aimed specifically at reducing gun violence. However, unlike Project Hope and the fine-paying experiment, the certain punishment is far more draconian—a lengthy prison sentence. For descriptions of the Boston intervention called Operation Ceasefire, see Kennedy, Braga, Piehl, and Waring (2001); the Richmond intervention called Project Exile, see Raphael and Ludwig (2003); and the Chicago-based intervention, see Papachristos, Meares, and Fagan (2007). A common feature of each intervention was commitment to federal prosecution for gun crimes that, on conviction, allowed for lengthy prison sentences. Notably, concerted efforts also were made to communicate the threat of certain and severe punishment to selected high-risk groups (e.g., members of violent gangs). All interventions claimed to have substantial success in reducing gun crime, but at least for Boston and Richmond, questions have been raised about whether the declines preceded the intervention or were no different than other comparable urban centers (Cook and Ludwig, 2006; Raphael and Ludwig, 2003). These concerns notwithstanding, each of these interventions illustrates the potential for combining elements of both certainty and severity enhancement to generate a targeted deterrent effect. Additional evaluations of the efficacy of this strategy should be a high priority.

Taken as whole, the literature on the preventive effect of policing contains much persuasive evidence that police prevent crime. It also makes clear that the effects of police on crime are heterogeneous. Not all methods for deploying police are comparably effective in reducing crime; indeed some deployment strategies seem to be completely ineffective. Thus, policy recommendations for increasing police resources to prevent crime are incomplete without more elaboration on how they should be used. We are thus sympathetic with the intellectual tradition in the police deployment literature of testing the effectiveness of alternative strategies for using police resources. We return to this observation in the conclusions.

Policy Implications and Future Research

The key empirical conclusions of our literature review are that at prevailing levels of certainty and severity, relatively little reliable evidence of variation in the severity of punishment having a substantial deterrent effect is available and that relatively strong evidence indicates that variation in the certainty of punishment has a large deterrent effect, particularly from the vantage point of specific programs that alter the use of police. In this section, we discuss how to translate these two general findings into policy recommendations. We divide these recommendations into the following categories: general and specific.

With respect to broad conclusions, we believe that it is reasonably clear that lengthy prison sentences particularly in the form of mandatory minimum statutes such as California's three strikes law are difficult to justify on a deterrence-based, crime-prevention basis. They might be justifiable based on either incapacitation benefits or along retributive lines. Although we have not surveyed the evidence on incapacitation, we are skeptical of the incapacitative efficiency of incarcerating aged criminals. The empirical evidence on the negative relationship between crime and age is strong (Farrington, 1986; Hirschi and Gottfredson, 1983). Although we certainly recognize that a subset of the population persists for which incapacitation is appropriate, a crude law such as three strikes does not provide a plausible screening mechanism for identifying these individuals. For the general incarceration of aged criminals to be socially efficient, it must have a deterrent effect on younger criminals, and the theoretical arguments we have made on discounting as well as the evidence we have presented on severity call such a deterrent effect into question. Simply no reliable evidence is available that such an effect is sufficiently large to justify the costs of long prison sentences. Furthermore, we are skeptical that a convincing ethical argument can be advanced for imposing a 25-year or more prison sentence for even a third-strike offense unless it is serious. Thus, we conclude that mandatory minimum statutes requiring lengthy sentences for repeat offenders either be repealed or greatly narrowed in terms of applicable offenses so that the sanction is reserved for repeat offenders who also commit serious crimes involving violence or large property losses. See Tonry (2009) for an extended discussion of this conclusion.

If one takes the total resources devoted to crime prevention as fixed, then our conclusions about the marginal deterrent effects of certainty and severity suggest that crime prevention would be enhanced by shifting resources from imprisonment to policing. In 2006, nationwide expenditures on police and corrections totaled \$168 billion with policing receiving 59% of this total (BJS). Our analysis does not provide specific guidance on how much the police share should be increased, but it is a realistic possibility that even a modest shift in resources away from imprisonment could reduce both crime and imprisonment. This conclusion follows from a shift of resources toward policies that exploit the high values of e_p and away from policies associated with the low values of e_L . Another possible candidate beneficiary beside the police for a crime-reducing resource shift are enhanced probation and parole supervision services along the lines of Project Hope. According to a 2009 BJS report by Bonczar and Glaze, for the year 2008, nearly 4.3 million individuals were on probation and more than .8 million were on parole. The failure rates among these individuals were high. Glaze and Bonczar reported that in 2008 approximately 400,000 probationers and 200,000 parolees were admitted to state prisons or local jails for probation/parole violations or for new crimes. Thus, probation and parole monitoring systems that are effective in reducing failure rates potentially could result in large reductions in crimes committed by probationers and parolees and in jail and prison admissions.

However, even such apparently self-evident conclusions might be difficult to translate into a defensible operational plan beyond a strong recommendation against any additional escalation of sentence length for initially high sentences. We mention this because our recommendations leave open many questions about the way the resources should be used in the pursuit of high e_p policies. In the context of our discussion, a shift of resources toward policing can lead to a range of changes, including more police, better logistics, and so on. The statistical literature on police resources and crime rates provides little guidance on how those resources should be used. Likewise, no demonstration has been given that probation/parole-monitoring systems designed along the lines of Project Hope can be replicated generally in settings outside the small island state of Hawaii. The success of the monitoring system clearly depends on the support and coordinated efforts of judges, parole/probation officers, and the police. The failure of intensive supervision probation to reduce recidivism rates is an object lesson in the difficulties of designing effective probation/parole-monitoring systems (MacKenzie, 2002; Petersilia, 1998)¹⁵ and should lead to circumspection in claiming that Project Hope can be extrapolated to the rest of the United States.

Our caveat on the difficulty of providing general policy advice from the existing literature is no deeper than the recognition that the details of any policy changes that simultaneously reduce sentences and shift the resource savings to policing, probation, and parole supervision matter. The literature on the crime-prevention effects of different strategies for mobilizing the police makes it clear that the way police resources are allocated is of first-order importance. This literature has assembled an impressive body of evidence that the so-called standard model of policing, which involves the non-strategic use of preventive patrols, rapid response to calls for service, and improved investigation methods, is not effective in deterring crime (National Research Council, 2004; Weisburd and Eck, 2004). A range of strategic uses of police (e.g., hot spot policing) have been shown to be effective. Also, certain forms of so-called POP have shown promise. At the same time, substantial heterogeneity in the specific policies that have been studied as well as the substantial heterogeneity is found in the effects of particular policies that the existing research has examined. This finding means that one cannot make a recommendation about the expansion of police resources that is as general as our recommendation that lengthy sentences be reduced and that large changes in penalties at the age of majority are undesirable. We thus close with a discussion of the type of research that in our judgment will be most effective in delineating the details of a policy that will achieve this policy objective.

We preface this discussion with an important caveat concerning our emphasis on identifying high-elasticity sanction policies, particularly those in which $e > 1$. Ultimately, a criminal justice policy, assuming it passes a priori justice considerations, should be judged

15. In addition, the question of the mechanism by which the resources would be transferred has not been addressed. As mentioned, imprisonment is, by and large, a state and federal function, whereas policing is, by and large, a local function.

on whether its benefits exceed its costs, including broad social conceptions of the costs of imprisonment. Policies with elasticities less than 1 might pass a benefit–cost test even though they increase prison population. Likewise, policies with elasticities greater than 1 that are costly to implement might fail the benefit–cost test even though they reduce prison populations. Still, in terms of policy evaluation, the message that these theoretical conditions are meant to convey is that high-elasticity policies are, other things being equal, more desirable than low-elasticity policies and that in principle no logical requirement exists that lower crime means higher imprisonment. The latter is important because of widespread concerns about the social costs of mass incarceration. So, in conjunction with the evaluation of policy effects on crime and imprisonment, clear delineation is needed of the overall costs of the policy.

We are skeptical that large numbers of $e_L > 1$ severity policies exist and that many high-elasticity severity policies exist even if this threshold is not met. In contrast, we are optimistic that viable police deployment strategies might produce $e_p > 1$ and strongly believe that the empirical evidence indicates high-elasticity, certainty-based policies exist. The identification of high-elasticity police deployment strategies thus should be a top priority. Although we know of no research that identifies policing strategies for which $e_p > 1$, the paucity of evidence does not imply the nonexistence of such policies. One issue might be research design. Assuming the postapprehension probability of imprisonment remains unchanged, a policing strategy that is effective in reducing both crime and imprisonment will reduce both the per capita crime rate and the per capita arrest rate. Police deployment research routinely measures effectiveness by the former measure but never measures effectiveness by the latter measure. Future research should measure both. Finally, we reiterate a point we made earlier; even if policing strategies with elasticities greater than 1 are scarce, substituting higher elasticity policing strategies for lower elasticity severity policies will reduce both crime and imprisonment.

What types of deployment strategies are good candidates for high-elasticity policies? We speculate that strategies that result in large and visible shifts in apprehension risk are the most likely to have deterrent effects that are large enough to reduce not only crime but also apprehensions. Hot spots policing might have this characteristic. More generally, the types of POP described and championed by Kennedy (2009) and by Kleiman (2009) have the common feature of targeting enforcement resources on selected high-crime people or places. Also, the multimodal approach to preventing crime among high-risk groups that combines deterrent and reintegration tactics described in Papachristos et al. (2007) is a creative example of a “carrot-and-stick” approach to crime prevention. Although the effectiveness of these strategies for focusing police and other criminal justice resources has yet to be demonstrated, priority attention should be given to their continued evaluation, particularly as they relate the “carrot” component of the intervention. Sanction-related interventions do not have to consist entirely of negative incentives. Interventions can include opportunities for job training as in Papachristos et al. (2007) or for reduced monitoring as a reward

for compliance with program requirements in Project Hope. The effectiveness of positive incentives is an understudied topic. Also, as noted, a thorough evaluation of adaptations of the Project Hope program for probation-monitoring settings outside of Hawaii and for parole monitoring should be a similarly high priority.

Research on targeted enforcement tactics also should focus on intangible costs. A heightened police presence might aggravate long-standing grievances of community residents with the police if the tactics involve more aggressive policing tactics such as “stop and frisk” and more generally create tension and suspicion between the police and the residents.¹⁶ Not only are such social costs important in their own right, but over the long term, they might erode any crime-control benefits that the tactics might induce initially. We also note that although little evidence indicates that increased severity is an effective deterrent, the literature is small and mostly focused on severity increments to already lengthy sentences. It is thus important to understand the circumstances better in which severity can be an effective deterrent. As we have noted, the fine payment experiment conducted by Weisburd et al. (2008) and the Project Hope experiment made it clear that the imminent threat of incarceration is a powerful incentive for paying delinquent fines or for conforming with conditions of probation even for populations who have not been deterred previously by the threat of punishment. These experiments suggest that the sanction need not be draconian to deter proscribed behavior. As we discussed, a non-linear relationship might exist between the magnitude of deterrent effects and sentence lengths. Sentence lengths in Western European countries tend to be far shorter than in the United States. For example, more than 90% of sentences in the Netherlands are less than 1 year (Nieuwbeerta, Nagin, and Blokland, 2009). Research based in European data on the deterrent effect of shorter sentence length should be a priority.

Another dimension of international research that potentially might be useful involves the identification of countries that have been successful in achieving a low crime rate and a low imprisonment equilibrium based at least in part on the strategic use of policing. Important issues that should be addressed are the ways in which police are used to achieve this equilibrium. Are proactive efforts made to reduce police–citizen frictions when more aggressive tactics are used? To what degree do police attempt to mobilize informal sources of social control within the community to prevent crime?¹⁷

We have made brief reference to a large literature on sanction risk perceptions. As emphasized in Nagin (1998), deterrent effects ultimately are determined by perceptions of sanction risk and severity. The literature on sanction risk perceptions shows that little correspondence takes place between perceptions and reality. For at least two reasons, this is

16. See, for example, a recent newspaper account of tensions created by the New York City Police Department’s stop-and-frisk tactics in a high rate neighborhood (Rivera, Baker, and Roberts, 2010).

17. We thank an anonymous reviewer for this suggestion.

not surprising. First, for most people, knowledge of actual sanctions is not relevant because, for moral, social, or economic reasons, they are not even remotely close to the margin of committing crime. Second, sanction risks and severity are not posted like most market prices. Instead, for the criminally inclined, they must be learned from experience or by word of mouth. This is why the work of Lochner (2007), Hjalmarsson (2009), as well as Anwar and Loughran (2009) on Bayesian updating of sanction risk perceptions based on experience with detection and non-detection for crimes committed is so important and should be extended. Likewise, a small body of research examines how criminal opportunity characteristics affect sanction risk perceptions (Klepper and Nagin, 1989a, 1989b). This type of work should focus particularly on how police deployment tactics affect perceptions of apprehension risk. As emphasized in the section titled *The Interrelationship of the Crime and Imprisonment Rates*, the rate at which police apprehend the actual perpetrators of crime is an incomplete signal of the overall risk of apprehension posed by the police because it does not measure the apprehension risk the police pose for criminal opportunities that were not acted on because the perceived risk of apprehension was deemed too high. To understand better the mechanism by which police presence might deter, innovative approaches for how police tactics affect perceptions of apprehension risk are required. Ethnographic research methods might be helpful in doing this research, but the development of quantitative approaches also should be a high priority.

We also recommend additional research on the determinants of criminal decision making. Although much work has been done on the formation of beliefs by criminals, as far as we know, no studies exist of whether criminals or non-criminals near the margin of a criminal choice are described better by nonexpected utility decision making than by the standard expected utility theory. In Durlauf and Nagin (in press), we discussed the relevance of nonexpected utility models to studying deterrence. At the risk of oversimplifying a complex body of work, considerable evidence exists that many individuals tend to overweight small probabilities and underweight large probabilities relative to standard expected utility calculations. Furthermore, this probability weighting follows an inverse S shape, which means that larger changes are found in the weights for large and small probabilities than for others. This finding suggests that an additional candidate explanation for the relatively robust evidence that increases in certainty of punishment lower crime in contexts such as hot spot policing is that such policing tactics are being implemented in a circumstance in which standard policing practice projects only a small probability of apprehension, so although the probability might be overweighted, changes in the probability lead to relatively large changes in behavior. Berns, Capra, Moore, and Noussair (2007) found evidence of this type of behavior in an experiment in which the “rewards” were electric shocks, which suggests the relevance of this theory for adverse outcomes (i.e., punishments). These types of findings matter because they suggest that the way in which the probability of apprehension p affects crime choices might be more complicated than it seems in specifications such as the one described in footnote 3.

Research on the deterrent effect of sentence length and more generally on the effects of changes in sentencing statutes on crime rates and imprisonment rates seriously is hampered by the lack of data on the distribution of sentence lengths and time served by different types of offenders across states. Such evidence is crucial for studying the deterrent and incapacitative effects of prison sanctions and for projecting impacts on crime rates and imprisonment rates of changes in prison sanction policies. Such data can be assembled for selected states from prison census data. Prison census data should be expanded to include all 50 states and should be made available in an easily accessible and manipulable format.

Nagin et al. (in press) lay out key elements of a research program on the effects of the experience of imprisonment on reoffending. These elements include the following: (a) measuring the dose–response relationship between the length of imprisonment and the reoffending rate and between the number of times imprisoned and the reoffending rate; (b) understanding how the experience of punishment affects perceptions of sanction risk; (c) analyzing the mechanisms by which the experience of imprisonment might be criminogenic; and (d) estimating the effect on reoffending of different non-custodial sanctions. This program also should be an integral part of an overall policy-oriented research program of sanction effects on crime.¹⁸

We would add to Nagin et al.'s (in press) list two additional elements. First, policy research should be more sensitive to heterogeneity and move away from the idea that policy effects are constant across jurisdictions. Although one can name many studies that relax homogeneity assumptions, we believe this relaxation should be the norm. Evidence that a given policy is efficacious in one jurisdiction but not in another is not a mark against the policy. Rather, such evidence means that local context matters for policy efficacy. In our judgment, research should identify a portfolio of policies that have been demonstrated to be effective in well-defined sets of circumstances. The local actors in the criminal justice system possess information not available at a more aggregated level; this information should be exploited in the choices of particular policies because they will have superior information on local context. This outcome raises a second additional point. In our view, a neglected area of policy evaluation concerns the incentives of local actors such as the police and prosecutors under alternative criminal sanction policies. In other words, the design of sanction policies needs to ensure that the incentives of the police and others are such that they act in a way to maximize policy effectiveness. For example, the evidence amassed in Loftin et al. (1983) and Loftin and McDowell (1981, 1984) that sentence add-ons for gun use did not seem to

18. One example of the relevance of this sanction experience research agenda for the policy conclusions of this article is that if the potentially criminogenic effects of imprisonment are mostly a result of sentence length, then this finding would reinforce our arguments for shorter sentences. However, if it is mostly a result of stigma, not sentence length, then this finding would call into question a policy of short but certain sentences. At this time, the empirical evidence is not sufficient to distinguish each of these two plausible alternative explanations for criminogenic effects.

increase sentence lengths suggests that judges and prosecutors for some reason were resistant to their application.

A final area where more research is needed concerns the sanction effect we have not addressed—incapacitation. As we have emphasized repeatedly, deterrence effects are necessary for it to be possible for a sanction policy to reduce both crime and punishment. This conclusion, however, does not imply that crime prevention by incapacitation does not have a role to play in crime-control policy. Furthermore, incapacitation, if strong enough, can lead to policy changes that reduce crime at the cost of greater imprisonment and so work against the spirit of our argument.

However, the fact that incapacitation might be appropriate for some criminals does not mean that imprisonment needs to be nearly so widespread as it is. An efficient use of incapacitation requires the technical capacity for prospectively identifying high-rate offenders based on legally defensible characteristics. We believe that the mass incarceration found in contemporary America is mixing prisoners with different sensitivities to deterrence, in particular, and with different crime proclivities, in general; hence, incapacitation can go hand in hand with a reduction of crime and imprisonment via an effective use of deterrence. Justice also requires that the identification technology not produce unacceptably large numbers of false positives. The incapacitation of false-positive, high-rate offenders not only wastes prison resources but also is a source of social injustice. To our knowledge, no proven technology exists for the *ex ante* identification of high-rate offenders with acceptable false-positive rates. However, this does not mean that such a technical capacity might not be feasible; recent work by Berk, Sherman, Barnes, Kurtz, and Ahlman (2009) is an example of efforts to use sophisticated statistical methods to achieve accurate predictions. Thus, we also recommend that more research be done on developing this prediction capacity. In addition, effective incapacitation policies will involve fairly intricate considerations of the sentencing structure so that sentence lengths efficiently use information on recidivism probabilities. It is not clear that such subtlety can be made operational. Nevertheless, we emphasize that any policy adjustments designed to reduce crime and imprisonment via deterrent effects should account for possible incapacitation effects. We believe these effects are implausible in the context of long sentences. But we could imagine that incapacitation might undermine a deterrent-based argument to reduce sentences for young offenders.

Although sound empirical evidence must be a core element of a crime-control policy based on science, policy cannot be based on empirical evidence alone. It also must be based on sound theory because, just as in medicine in which evidence on treatment effectiveness cannot cover all medical contingencies, evidence on sanction effectiveness cannot cover all crime contingencies related to sanction policy. Physicians must make judgments about treatment recommendations based both on evidence and on their theoretical knowledge of the functioning of the human body. Similarly, crime-control policy as it relates to criminal sanctions and the deployment of the criminal justice system (CJS) must combine discrete pieces of empirical evidence with theory on the response to the sanction threats

created by the CJS. To this end, in Durlauf and Nagin (in press), we laid out several proposals for generalizing the economic model of crime to account for psychological and sociological aspects of criminal behavior. Thus, we urge the reverse of this form of disciplinary generalization for noneconomic models of crime, namely that they incorporate aspects of the choice-based focus of the economic model.

Implementation of our policy and research recommendations poses significant institutional challenges. One concerns devising a system for transferring resources from corrections, which is primarily a state-level function, to policing, which is primarily a local-level function. Although states routinely make state-to-local-level transfers for other functions such as education, transportation, and community development, a transfer from corrections to policing poses some special challenges. In most states, variations in crime rates across local police jurisdiction are large. Thus, devising a politically feasible mechanism for transferring resources to the highest need locales likely will be difficult. A related problem is devising a mechanism for monitoring the use of the transfers to ensure that resources are used effectively to reduce crime. Designing such a system of monitoring is difficult both because of the large gaps in knowledge about what constitutes effective use and the importance of honoring local independence.

A second institutional challenge concerns research infrastructure. The research agenda that we outline is ambitious and will require the type of sustained and substantial resource commitment that only the federal government can provide. The National Institutes of Health are the model we have in mind for the way this research program should be administered. The obvious candidate for taking on this responsibility is the National Institute of Justice (NIJ). However, for the NIJ to manage such a research program effectively along the lines of an NIH institute, it is incumbent that it adopt the reforms outlined in the recently released National Research Council report *Strengthening Scientific Research and Development at the National Institute of Justice*. We, thus, lend our full support to the report's recommendations.¹⁹

Finally, we emphasize the importance of recognizing the limits to knowledge faced by policy makers. To some degree, gaps in empirical knowledge can be filled by more complete theory. However, even with better theory, substantial and irreducible empirical uncertainties will remain. In our judgment, far too many proposals for crime amelioration take a single study as their basis or use a subset of studies from a broader literature. Instead, we believe that policy recommendations should be based on cumulative evidence from statistically and scientifically sound research and should place particular value on evidence of the effectiveness of specific crime-control treatments. This emphasis has a strong analogy to the medical literature in which evidence of the efficacy of a particular drug regimen or a specific preventive measure is of the highest value. We also would conjecture that more

19. In the interest of full disclosure, one of the authors (Nagin) was a member of the National Research Council committee responsible for this report.

attention should be paid to the effects of policies on particular types of crimes. Again, in the spirit of the medical analogy, policies that are effective for one type of crime might have little effect on others. For example, hot spots policing is unlikely to be effective in reducing crimes such as domestic violence or other crimes that generally occur in non-public places (most homicides occur outdoors). Our argument is that just as in medicine in which a portfolio of treatments is required to address a heterogeneous range of diseases, a well-designed crime-control policy requires a portfolio of crime-control treatments to address diversity in the type of crimes and in the people who commit them.

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Steven N. Durlauf is Kenneth J. Arrow and Laurits R. Christensen Professor of Economics at the University of Wisconsin at Madison. He is a Fellow of the Econometric Society and a Research Associate of the National Bureau of Economic Research. Durlauf has worked extensively on methodological issues involving inequality, social determinants of behavior, and policy evaluation.

Daniel S. Nagin is Teresa and H. John Heinz III University Professor of Public Policy and Statistics in the Heinz College, Carnegie Mellon University. He is an elected Fellow of the American Society of Criminology and of the American Society for the Advancement of Science and is the 2006 recipient of the American Society of Criminology's Edwin H Sutherland Award. His research focuses on the evolution of criminal and antisocial behaviors over the life course, the deterrent effect of criminal and non-criminal penalties on illegal behaviors, and the development of statistical methods for analyzing longitudinal data.

Thoughts from Pennsylvania on “Imprisonment and crime: Can both be reduced?”

Mark H. Bergstrom

Pennsylvania Commission on Sentencing

The question posed in the title of the article by Durlauf and Nagin (2011, this issue), can imprisonment and crime be reduced, has become commonplace in recent years, with a solution being sought by every jurisdictions wrestling with prison overcrowding and public safety concerns during an economic recession. Aside from being labeled as “soft on crime,” policy makers often fear a budget-driven reduction in incarceration will trigger an increase in crime.

So it is good news that as of January 1, 2010, the first decline in the number of state prisoners in the United States in nearly 40 years was reported (The Pew Center on the States [Pew], 2010). It seems that a case can be made that imprisonment and crime can be reduced simultaneously, or at least that incarceration can be reduced without increasing crime. However, the results contained in the Pew report are mixed: reductions in 26 states, and increases in 24 states. And, as noted in the report, it is far from clear why the steady decline in the crime rate for the past 20 years only now is reflected in a modest drop in sentenced prisoners (Pew, 2010).

The successful effort in Virginia to incorporate the consideration of risk at sentencing, both to divert low-risk offenders from prison and to incapacitate high-risk sex offenders, is one example of simultaneous reductions in imprisonment and crime (Kern and Farrar-Owens, 2004). Pew (2010) identified three specific interventions found in states with prison reductions: diverting low-level offenders and probation and parole violators from prison, strengthening community supervision and reentry programs, and accelerating the release of low-risk inmates who complete risk reduction programs. Better sorting of offenders for rehabilitation or incapacitation, and recalibration of the retributive metrics

Direct correspondence to Mark H. Bergstrom, Pennsylvania Commission on Sentencing, P. O. Box 1200, State College, PA 16804-1200 (e-mail: mhb105@psu.edu).

used to define appropriate sentence lengths, also are part of this process. Collectively, these efforts represent a move toward more efficient use of existing correctional resources, with the savings generated from diversions and reduction in the time served by offenders, as well as from lower recidivism for those exiting the system, reinvested in community supervision and services.

Unfortunately, Pennsylvania was not one of the 26 states with reductions in incarceration. In fact, Pennsylvania was distinguished as the state with the greatest absolute increase in prison population (+ 2,122) and with the fourth highest rate of increase (+ 4.3%) (Pew, 2010). Several factors contributed to this increase, not the least of which was the lingering impact of a 2-month parole moratorium in late 2008, a suppressed parole rate for much of 2009 (Pennsylvania Board of Probation and Parole [PBPP], 2009), and parole violations accounting for 28% of Department of Corrections admissions (Pennsylvania Department of Corrections, 2010). And although admissions for new sentences also increased, this was related to an increase in the number of sentences imposed; the percentage of cases committed to state prison held steady at 14% of all sentences, with the minimum and maximum terms comparable with those imposed in 1990. Between 1990 and 2009, the total number of sentences reported increased by nearly 70%, whereas the percentage of sentences receiving a term of incarceration (jail and prison) dropped from 60% to 44%.

In their article, Durlauf and Nagin (2011) are not just promoting changes at sentencing or release to achieve concurrent reductions in imprisonment and crime, or looking to improve the outcomes for those caught up in the criminal justice system to attain the same end, but also they are advocating more fundamental reforms that reach beyond courts and corrections. In an effort to reduce both imprisonment and crime, they work from the other direction, focusing on deterrence and the prevention of crime to achieve reductions in imprisonment. They suggest a shift from severity-oriented to certainty-oriented crime prevention strategies, supported by the following claims: (a) increasing already lengthy prison sentences will have only a modest deterrent effect; (b) increasing the visibility of police, with its corresponding increase in offenders' perceived risk of apprehension, will have a substantial deterrent effect; and (c) the experience of imprisonment seems in itself to be criminogenic.

Elements of a shift to certainty consistent with these claims might include (a) a reduction in the duration of prison sentences; (b) expanded and redeployed police resources to increase the risk of arrest, leading to a suppression of crime and its related costs and to more certainty of arrest when crimes are committed; and (c) diversion from prison of cases not justified by other purposes. Durlauf and Nagin (2011) recommend that the savings realized from reduced imprisonment (i.e., reduced admissions from a lower crime rate and reduced length of sentences) be reallocated to support the increase in law enforcement, as well as to supplement probation and parole services. In sum, they argue that the shifting of resources from corrections to law enforcement will reduce crime, which in turn will reduce incarceration.

In this policy essay, I hope to relate several findings from research by the Pennsylvania Commission on Sentencing (PCS) to the issues raised by Durlauf and Nagin (2011) and to express caution that an increase in law enforcement and probation/parole personnel without clear deployment standards could contribute to an increase in prison admissions for new convictions and parole violations. For these and other reasons, I also strongly support the ambitious five-point research agenda that Durlauf and Nagin propose.

At the outset, it is important to note the multiple purposes of sentencing, because many competing purposes may drive public policy and individual sentencing and release decisions. As an example, Pennsylvania's Sentencing Code¹ requires criminal courts to consider the protection of the public, the gravity of the offense as it relates to the impact on the life of the victim and on the community, and the rehabilitative needs of the defendant when determining a sentence. Pennsylvania's sentencing guidelines² explicitly identify retribution as the primary focus of the sentencing system, but they include recommendations that allow for consideration of other purposes, including rehabilitation, incapacitation, and deterrence. A recent study of mandatory minimum sentencing provisions in Pennsylvania also found the assignment of multiple purposes, including certainty of punishment (defining minimum terms the court is required to impose), incapacitation (interrupting the life cycle of violent and other serious crimes), deterrence (detering certain types of crime), and retribution (sentencing should bear a rational relationship to the type of crime committed) (PCS, 2009).

Durlauf and Nagin (2011) address at least one of these competing purposes, suggesting that incapacitation alone may reduce crime but at the cost of increased imprisonment (i.e., incapacitation necessarily requires the incarceration of an individual who would otherwise be criminally active). Consistent with this view, the study of mandatory minimum sentences in Pennsylvania found support for the use of incapacitation to address chronic and career criminals but recommended careful consideration of related issues such as the age-crime curve and risk factors associated with certain repeat violent offenders when making this determination. Failure to target appropriately offenders who potentially are subject to very long periods of imprisonment may result in overly broad application of incapacitation (PCS, 2009).

Studies involving the treatment of drug-dependent offenders document the benefits of rehabilitation, in terms of both sobriety and reduced recidivism (Kramer, Williams, and Williamson, 2006; PCS, 2010). On the one hand, such intervention (or perhaps better characterized as postvention), when administered by the courts or corrections, occurs late in the process; the crime already has been committed, and the offender is already in the web of the criminal justice system.

1. 42 Pa. Cons. Stat. § 9721.

2. 204 Pa.Code § 303.11(a).

Deterrence, on the other hand, is promoted by Durlauf and Nagin (2011) as having an added benefit over other purposes. In addition to potential reductions in recidivism of those who have been formally processed through the courts (specific deterrence), and potential avoidance of crime through warnings to would-be offenders (general deterrence), they argue that deterrence through enhanced law enforcement reduces crime by increasing the risk associated with it, and by increasing the certainty of punishment when a crime is committed. In their article, Durlauf and Nagin focus their discussion on an analysis of this deterrence-based approach, providing both a framework for review and a basis to test outcomes.

Durlauf and Nagin (2011) provide substantial attention to the interplay between certainty and severity of punishment, and they note that the empirical support for the deterrent effect of certainty is far stronger than that for severity. Applying this to law enforcement, they suggest that increasing the perceived risk of apprehension, that is increasing the certainty of arrest through the visible deployment of more police officers, will reduce the incidence of crime. They point to the work by Weisburd and others as examples of how the concentration of police officers in certain hot spots can reduce crime without displacing it to other areas.

What is absent from this discussion of the certainty of punishment is a definition of what constitutes punishment, and whether consideration of factors subsequent to arrest, such as whether the arrestee is convicted or the nature of the sentence imposed, contributes to the deterrent effect of certainty. Is certainty of arrest the same as certainty of punishment? Is an arrest alone adequate punishment, or is something else required? Even if criminals adjust their offending ways based on a recalculation of risk of apprehension, for those who are arrested, is some minimum sanction needed to satisfy the condition of punishment? Does uncertain and uneven punishment, resulting from differential processing of similar cases or perceived leniency in the disposition or duration of a sentence, undermine this deterrence model?

In Pennsylvania, 34% of offenders charged with a mandatory-eligible offense were convicted of a less serious offense that removed them from exposure to the mandatory sentencing provision. Less than half (46%) of mandatory-eligible convictions resulted in a sentence equal to or greater than that provided in the statute (PCS, 2009). Should inconsistency and uncertainty in the application of mandatory sentencing provisions, or the specific disposition or duration of these sentences, matter if the focus of deterrence is shifted to law enforcement activities? This is not a question of the severity or scaling of punishment, but it is a question of whether a sentencing threshold must be crossed for the disposition after arrest to be perceived as punishment.

Extending this inquiry to a more traditional sentencing-based deterrence model, should knowledge of potential penalties matter? If one purpose of mandatory minimum sentences is to deter people from committing certain crimes, is general awareness of the prohibitions and penalties required? Only 34% of Pennsylvanians surveyed could correctly name any mandatory-eligible offense (PCS, 2009). A separate survey of inmates found substantially higher knowledge of mandatory sentencing provisions, which may be

attributed to experiential learning. Over half of these same inmates reported being under the influence of drugs and/or alcohol at the time of the offense for which they were convicted. Most offenders said they had at least thought about the possibility that they would be arrested before committing the current offense, but most did not think about the type of sentence they would receive if caught. After arrest and conviction, most said the sentence they received was higher than what they expected (PCS, 2009). Should an offender's calculation of apprehension risk also include a calculation of punishment risk, building on principles of general deterrence?

These offender survey responses lend support to the primacy of certainty over severity. Other findings from the Pennsylvania study of mandatory minimum sentences are consistent with those presented by Durlauf and Nagin (2011), including that offenders with prior convictions and those sentenced to prison are more likely to recidivate, and that neither length of sentence nor the imposition of the mandatory sentence per se was related to recidivism (PCS, 2009).

Even if one assumes expanded or redeployed law enforcement can be effective in reducing crime, can we be certain that an increase in the number of police officers will not result in an increase in arrests, or that an enhancement of probation and parole services will not result in an increase in revocations? In both cases, the outcome likely will be linked to the purposes animating the expanded deployment, the type of offenses targeted, and the quality of planning and implementation.

In 2000, 954,548 crimes were reported to police in Pennsylvania, of which 18.80% was Part I offenses (index crimes) and 81.20% was Part II. By 2009, 955,669 crimes were reported, with 18.00% Part I and 82.00% Part II. Although relatively minor growth in the civilian population occurred during this 10-year period, the overall crime rate dropped from 7,958.50 to 7,677.10, with the index rate dropping from 2,816.60 to 2,616.90. These impressively similar reports mask a substantial drop in reported crimes in 2001 (to 892,324), a sustained increase during the seven subsequent years (to a peak of 1,007,674 in 2008), before the second drop in 2009. And although both Part I and Part II offenses dipped and grew and dipped again, Part II offenses, including drug trafficking offenses, clearly drove these trends (Pennsylvania State Police [PSP], 2000–2009).

Throughout this period of time, arrests generally tracked crimes reported, with a clearance rate increasing fairly steadily from 46% to 51%. The number of full-time police officers fluctuated but increased from 24,200 in 2000 to a high of 27,423 in 2009; the lowest level during this period was 22,351 in 2001. Arrests per officer stayed in a fairly tight band of 17.20 to 19.51. Reflecting the same general trends as crimes reported and clearance through arrest, new court cases, court dispositions, and court admission to state prison reflected steady increases between 2000 and 2008, with a slight reduction in 2009 (Administrative Office of Pennsylvania Courts [AOPC], 2000–2009; PSP, 2000–2009).

Taking very seriously Durlauf and Nagin's (2011) review of the research included in their "Empirics" section, and in particular their criticism of "spurious claims of causality

from correlation,” this brief discussion of trends in Pennsylvania is only intended to raise questions for more serious and informed analysis. However, when considering crimes reported and state prison admissions side by side, it is surprising that the dramatic drop in both Part I and Part II crimes reported from 2000 to 2001 are not reflected in sentencing or corrections data, even if assuming some process delays. Perhaps more comforting, the recent but less substantial drop in crimes reported from 2008 to 2009 corresponds with modest reductions in new court cases and court commitments to state prison. What may help to explain this difference is the number of reported and cleared drug offenses, which did not dip from 2000 to 2001 but did from 2008 to 2009 (AOPC, 2000–2009; PSP, 2000–2009).

The possibility that arrests, convictions, and sentences for drug offenses could sustain prison growth, even when the crime rate is dropping, is not a novel idea. In 1997, the Pennsylvania Department of Corrections reported narcotic drug convictions as the primary offense for 13.9% of its population; by 2007, this increased to 17.2%. The PCS reported that drug violations increased from 17.3% of all criminal incidents in 1997 to 21.9% in 2007; the reported use of mandatory minimum sentences for drug trafficking increased during this same period from 364 cases to 1,676 (PCS, 2009).

A concern specific to drug offenses, which runs counter to part of Durlauf and Nagin’s (2011) law enforcement deterrence argument and to some of the research cited, is that although increased police visibility may suppress crime, increased police enforcement may increase arrests. This is particularly true because drug offenses are less often reported to the police and more often identified by the police; demand for controlled substances supports the rapid replacement of arrested dealers; and funding of targeted law enforcement activities is derived in part through forfeitures linked to convictions. The use of community policing techniques that increase police presence while promoting neighborhood cohesion and stability may be successful in reducing crime and arrests; the permanent establishment of drug task forces, incentivized to infiltrate drug enterprises in order to obtain arrests and convictions, may reduce crime while increasing arrests.

Other examples of enforcement-focused deterrence may find reductions in crime without substantially increasing arrests. Driving-under-the-influence roadblocks, which at least in Pennsylvania are advertised in advance and provide generous protections to avoid entrapment (e.g., there is no requirement that a driver go through a roadblock),³ very publicly revise upward the estimate of apprehension risk, thus discouraging drunk driving. Megan’s Law registration and notification provisions expand surveillance resources by enlisting entire communities to monitor sex offenders, increasing risk of arrest for new offenses or other violations.

In addition to shifting resources for enhanced police deployment, Durlauf and Nagin (2011) also would reinvest in probation and parole services. They note approvingly the

3. *Commonwealth v. Scavello* (1999).

success of the HOPE project, in which swift and certain but modest consequences are imposed immediately for even relatively minor violation or infractions. However, in an attempt to expand the use and capacity of community supervision, more is not necessarily better. Net widening, intensive supervision of low-risk offenders, and overloading with noncriminogenic conditions can all lead to increases in confinement resulting from high rates of revocations. More targeted deployment of probation and parole resources, such as through the assignment of supervision levels based on the risk and needs of the offenders, and the reduction or elimination of supervision for low-risk offenders, may increase the capacity for community supervision and reduce revocation rates.

Perhaps the most compelling recommendation contained in Durlauf and Nagin's (2011) article is the five-point research plan. This plan includes careful examination of the deterrent effects of changes in policies, perceived sanction risk and severity, length of sentence and imprisonment as a criminogenic factor, as well as the role of incapacitation in crime-control policy. One limitation of existing research is the tendency to focus on a single component or role, such as law enforcement, prosecution, sentencing, corrections, or parole, without adequate consideration of the criminal justice system as a whole. The improved tracking of cases through the entire system, with particular emphasis on impacts during transitions between phases or across jurisdictions, can lead to the development of better and more coordinated policies and practices. Technological advances in recent years, as well as improvements in data quality and accessibility, open new opportunities for this ambitious research agenda.

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Mark H. Bergstrom is the Executive Director of the Pennsylvania Commission on Sentencing; a Senior Lecturer in Crime, Law and Justice at The Pennsylvania State University; an Adjunct Professor of Law at the Duquesne University School of Law; and Adjunct Faculty at the Villanova University School of Law. He also serves as a State Sentencing & Corrections Associate with the Vera Institute of Justice, providing technical assistance to jurisdictions on sentencing and corrections reforms.

Reducing crime through prevention not incarceration

William J. Bratton

Chairman of Kroll, an Altegrity Company

This policy essay by William J. Bratton, former Commissioner of the NYPD and Chief of LAPD, provides a useful overview of the key issues involved in determining how to address crime and provides an interesting research agenda for exploring the potential impact of options that favor policing and reduce reliance on incarceration. Changing the current focus from one that presumes that increased incarceration results in crime reduction to one that works to prevent crime requires a paradigm shift of major proportions. It is worthy of consideration.

The cost of incarceration has become a significant concern of governments that are facing expanding fiscal deficits. Beyond the fiscal impact of prison expenditures—which threaten to bankrupt several state governments—serious questions have been raised about the effectiveness of prison sentences as a means of reducing crime.

It is a fact that prisons are expensive to operate. They are far more expensive than alternative measures that may have the same or better effect on preventing crime. Once in prison, many inmates are exposed to others who have become hardcore criminals and work to lead the less experienced into a more organized life of crime. Prisons also have become breeding grounds for gang activity and, in some cases, terrorist recruitment.

There has been a tendency for political leaders, responding to public concerns about crime, to push for increased prison sentences when crime starts to increase. The “three strikes” approach used in several states has political appeal for dealing with repeat offenders. But as experience often shows, these approaches have given false hope—evidence has shown limited impact on crime levels and recidivism.

Direct correspondence to William J. Bratton, 570 Lexington Avenue, 7th Floor, NY, NY 10022.

Prison as a Crimogenic Factor

It has been assumed that when sentenced to prison, people will learn a lesson and avoid being involved in future criminal acts. But the overwhelming evidence shows otherwise. Those who have been to prison find that when released they cannot find employment or housing because of their prison record. Without a means of support, they are left to support themselves by other means, often by returning to crime. In some cases, former offenders capitalize on associations they made in prison when they cannot reenter the job market and return to the underground economy to meet their needs. For others, stints in prison enhance offenders' reputation and solidify their place in the world of crime. In these ways, prison has the unintended consequences of preparing some for involvement in more serious crime and solidifying their stature as outlaws.

The authors also note that the effect of increasing already lengthy prison sentences is marginal, at best. The authors effectively make the case that imprisonment does not only not decrease nor deter crime, but also significantly increases state expenditures necessary to expand prison capacity. In short, in and of itself, the American approach to imprisonment may in fact be crimogenic.

Shifting the Focus Back to Policing

The authors propose that by shifting focus to policing, increasing the visibility of the police by hiring more officers, or allocating additional officers in ways that heighten the perceived risk of apprehension, crime and imprisonment can be reduced simultaneously. This approach, they argue, may have substantial deterrent effects. The authors leave undefined, as a matter to be addressed in their proposed research agenda, what the most effective policing strategies would be.

It is a valid and increasingly pressing question today to ask whether there is an alternative to increased and prolonged incarceration as a crime reduction strategy. Increased policing might be an option but only if that increased law enforcement activity is more sophisticated than it is in most communities today. Simply adding police resources may well result in greater arrests and, thus, greater numbers of people being sent to prison. There are far better options to be considered.

Police are fairly effective in solving crimes that capture the public attention but are far less effective in solving the majority of crime that creates fear and disorder in our communities. The clearance rates for crimes are far less than 50% for Part 1 crimes: those crimes that are most likely to be reported to police and reported yearly by the Federal Bureau of Investigation (FBI) as national crime statistics (FBI, 2009). This low clearance rate in urban communities often results from people's unwillingness to cooperate with police in protest of policing policies that do not distinguish between people who pose a threat and people who must live in neighborhoods characterized as crime "hot spots."

Lessons for the Future

One thing we know for sure from lessons learned at the end of the 20th century: in the 21st century, we cannot arrest our way out of America's crime problem. Arrests are not effective in reducing communities' fears. For people living in urban communities, fear is less the result of major crime than the cumulative, corrosive impacts of persistent, less serious crime to which people are exposed, or at risk of experiencing, daily. Speeding cars, disorderly groups, noise, and petty larceny have a far greater impact on how people feel about safety in their neighborhoods than some serious crimes.

My experience shows that cops count—not necessarily in solving crimes but in preventing future occurrences. We call this approach “predictive policing.” It is the ability to predict where the next crime will occur and the ability to take action to prevent its occurrence. In Los Angeles, where we began implementation of this policing approach, we attained sustained reduction in crime levels across 7 years. Police were shown to have a major impact on the level of crime—where increased and more severe prison sentences had failed to make a dent (Beck et al., 2009).

This approach is not accepted in many police agencies; it is a strategy that must become a part of the basic fabric of the police organization. The origins of the approach come from New York City, where public perception of crime in the city being out of control was widespread. The level of homicide was enormous. But more important, in many of the city's neighborhoods, minor crime was widespread. Residents were fearful of walking the streets. Disorder was endemic in many neighborhoods.

We started by a fairly simple construct: know where crime is happening, analyze those events, and then place police officers at the locations showing the greatest amount of criminal activity. This approach became known as “cops on the dots.” It had a major effect on reducing the level of crime in New York City to historic lows (Bratton and Andrews, 1999).

Other aspects of the strategy were equally important, such as creating accountability among police commanders for taking crime seriously and having strategies to address crime patterns effectively at key locations. Together the actions of the NYPD changed the nature of the New York City environment. Surely, we increased the probability that if you violated the law, you would be caught and sent to prison. But more important, the public began to see that normal life in the city need not be one of fear and disorder (Kelling and Bratton, 1988). Because of the police effort to control minor crimes and offenses, and by increasing the certainty that major offenses would be solved and the offenders arrested, crime dramatically decreased during the initial 2-year period and has continued to decrease since. The prison population in the City's Riker's Island facility declined dramatically as a direct result of those police activities. In the late 1990s, the inmate population hovered around the 20,000 mark (Roberts, 2010). Today, it stands around 13,000. In addition, the New York State prison population has dropped as well. This goes to reinforce the premise that police can control behavior to such an extent that they can change it.

The culture of what was the “norm” for behavior dramatically changed throughout the city, as well. For example, if you were found to be carrying a weapon, you would be prosecuted to the fullest extent of the law and serve time. The certainty of what would happen reinforced the sense that one should not carry a firearm on the streets of New York City, resulting in a direct impact on homicide rates.

In Los Angeles, having far fewer resources, the strategy we adopted went further than in New York City. Recognizing the relationship of trust with the community played an important part in getting the public to lower their tolerance level for crime, major emphasis was put on changing the perception of police throughout the community. The same systems were put in place to track crime and assign police resources to areas that showed patterns of criminal activity. But a stronger emphasis was placed on analysis and on predicting where the next crime would occur. From that analysis—done in real time—preventive actions could be undertaken.

The result was that police were often in the areas with the greatest probability of crime occurrence. Such predictive analysis often prevented the next criminal act. With no criminal act, there was no arrest, no conviction, and no incarceration of perpetrators.

Both cities based much of the problem-solving strategies on the work of James Q. Wilson and George Kelling set forth in their seminal article “Broken Windows” (Kelling and Wilson, 1982). It has served as the basis for many of the effective crime reduction initiatives undertaken across the country.

Experience shows that these approaches work. But they are not the only approaches that can reduce crime and lower prisoner populations. The key in developing effective crime-reduction strategies for police is to understand the nature of the crimes that are occurring, the characteristics of those who engage in these criminal acts, and the actions that will reduce the probability that these acts will occur.

There are numerous examples of effective strategies developed from such analysis. David Kennedy at the John Jay College of Criminal Justice has developed comprehensive strategies that reduce drug markets while limiting the number of persons arrested. Compelling members of the community to participate in partnerships to maintain drug-free environments has had dramatic effects in locations such as High Point, North Carolina, and Cincinnati, Ohio.

The key has been that the severity of the punishment has been matched with the certainty of its occurrence: After arrests of drug market king pins, community members and lower low-level, younger drug offenders and their parents were warned that they would be arrested for such activity. The immediate reduction in drug sales and related violence was striking—and better yet, replicable in a number of different settings with variations and considerable success. Again, the police initiative was carefully planned to focus more on deterrence than on incarceration.

Other examples of strategic thinking in addressing a low-level disorder without arrest has been demonstrated in Boston, where Transit Police arrested numerous young people

in transit hubs after school for engaging in disorder. With guidance from founders of a Cambridge nonprofit “Strategies for Youth” transit police, parents, schoolteachers, principles, and youth advocates formed teams that were present at the hubs before and after school (MBTA Transit Police, 2005). The teams made reducing anonymity and developing positive interactions with youth their goal. The arrest level of juveniles dramatically decreased without concomitant increases in crime: no arrests, no jail time. The success of this effort has been sustained for 8 years.

These examples reinforced the argument that cops count, providing they adopt carefully developed strategies that will predict criminal occurrences and provide approaches that involve communities in finding solutions to their problems. Inevitably, arrest of major criminals will lead to incarceration. But today prisons are filled with lower level violators for whom prison has limited impact on their future criminal activities and, all too often, enhances the likelihood that they will increase their involvement in crime.

The research agenda set forth by Steven N. Durlauf and Daniel S. Nagin (2011, this issue) is ambitious but provides a good outline of the research that is needed if the current, unsustainable equation is to be altered. There has been discussion of the need for a National Commission on Crime and Policing that could bring greatly increased knowledge of the options and their impact (U.S. Senate, 2010).

Durlauf and Nagin’s (2011) research agenda needs to be clarified and organized sequentially, with the National Institute of Justice developing a research agenda for the next few years that will begin to explore the impact of different options. For police, evaluation of the current strategies for predictive policing will be important to provide guidance to agencies in adopting the approach.

In the meantime, police agencies need to consider approaches carefully that will reduce the incidence of crime through carefully developed strategies that value deterrence as much as arrest.

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William J. Bratton is the Chairman of Kroll, the world's leading risk consulting company. Mr. Bratton joined Altegrity in November 2009, after serving as Chief of the Los Angeles Police Department (LAPD). He is known as one of America's premier police chiefs, the only person to have led the two largest police departments in the United States, the New York City Police Department and the LAPD. As Chief of the New York City Transit Police, Boston Police Commissioner, New York City Police Commissioner, and Chief of the LAPD, Mr. Bratton revitalized police morale and cut crime significantly in all four posts. In New York, he led the development and deployment of CompStat, which has revolutionized policing all over the world. In Los Angeles, he is also credited with improving relationships with the city's many diverse communities. A frequent lecturer, writer, and commentator in the fields of security, counterterrorism, law enforcement, and rule of law justice systems, Mr. Bratton is a member of the Homeland Security Advisory Council, whose members provide advice and recommendations on a variety of homeland security issues to the Secretary of the U.S. Department of Homeland Security. He has also been the recipient of many honors throughout his career including being recognized in 2009 by Her Majesty Queen Elizabeth II with the honorary title of Commander of the Most Excellent Order of the British Empire (CBE). He holds a Bachelor of Science degree from Boston State College, is a graduate of the FBI National Executive Institute, and the Senior Executive Fellows Program at Harvard's John F. Kennedy School of Government. His critically acclaimed autobiography *Turnaround* was published in 1998.

The challenges of implementing research-based policies

Marc Mauer

The Sentencing Project

Durlauf and Nagin (2011, this issue) have developed a compelling argument for public safety policy initiatives that follow from criminological research. Two features of the piece are particularly useful. First, although a long history exists of examining deterrence within the field of criminology, surprisingly little discussion has taken place about the issue in broader public policy debates. In particular, the assessment of the relative impacts of the certainty and severity of punishment is important in the current era of “get tough” sentencing. Although prison populations have escalated dramatically as a result of changes in sentencing policy and practice, any discussion about the relative merits of these changes has focused largely on incapacitation effects. Such an assessment is not unreasonable, but it does result in overlooking a potentially significant area of analysis—analyzing the deterrent effect of increasingly longer prison terms particularly at a moment when such policies are already extremely harsh.

Durlauf and Nagin’s (2011) other contribution is to lay out a strategy that holds the promise of both less crime and less incarceration by using the deterrence findings to call for resource shifts designed to enhance the certainty of punishment at the level of law enforcement. In a rational world, both policy makers and the public would welcome such outcomes and engage in a process to consider how to implement such a strategy.

Thus, Durlauf and Nagin (2011) have provided us with a clear direction to advance policy objectives. To assess the feasibility and potential for such an initiative, let me raise some questions about the challenges involved in implementing such a strategy and the

Direct correspondence to Marc Mauer, The Sentencing Project, 1705 DeSales Street, NW, 8th Floor, Washington, DC, 20036 (e-mail: mauer@sentencingproject.org).

context in which such a shift would take place. The following issues in particular flow from this analysis.

Advancing the “Certainty Versus Severity” Argument with Policy Makers

It is no secret that the policies that have produced mass incarceration have run counter to virtually all research findings and recommendations of the field of criminology. As Rep. Bobby Scott, Chair of the House Judiciary Subcommittee on Crime, Terrorism, and Homeland Security, often has noted, “We have a choice—we can reduce crime or we can play politics” (Scott, 2009). Despite the fact that research-based evidence exists on how to produce public safety more effectively, far too many political leaders have embraced ideological and sound-bite–driven policies that have led to unprecedented prison populations along with diminishing returns for public safety. In recent years, several factors have come together to create a climate that is more hospitable for the consideration of broad-based strategies, one that could be receptive to analyses of deterrence issues. These factors include the constraints on spending produced by the fiscal crisis, the growing interest in evidence-based programming in sentencing and corrections, and bipartisan support for initiatives such as reentry and justice reinvestment as components of a public safety strategy.

Arguing against this development, however, are the decades-long dynamics of enacting criminal justice policy. All too often we have observed mandatory sentencing and other overly punitive policies adopted in the heat of the moment after a particularly sensationalized crime, with little regard for impact or effectiveness. Federal sentencing policies on crack cocaine, for example, were passed rapidly in 1986 after the death of basketball star Len Bias, and substantial, although incomplete, reforms were not passed until 2010, despite widespread criticism about their harmful effects and unwarranted racial disparity.

Arguments about deterrence effects face a particularly uphill road with policy makers. Public support for lengthy prison terms is based in large part on their intuitive appeal regarding incapacitation. That is, the knowledge that an offender is behind bars clearly conveys a message that the person will be prevented from committing any crimes in the community for the duration of his or her imprisonment. The longer that imprisonment, the safer the public might feel. That misinformed sense of security is stiff competition for the more nuanced assessment of potential deterrent effects (or lack thereof) produced by enhanced imprisonment.

None of these factors suggests that it is not worth the effort to try to convince policy makers that such a shift in policy would produce both fiscal and public safety benefits. Indeed, the theme of less crime and less incarceration is one that should appeal broadly. But clearly, achieving success in this area will involve not only the dissemination of sound research but also a political strategy that can garner broad bipartisan support for more rational and effective policies.

Law Enforcement Successes in Reducing Crime Might Be Challenging to Achieve

Durlauf and Nagin (2011) argue that to achieve gains in certainty of punishment, and hence reduced crime, that funding be made available for law enforcement initiatives such as hotspot policing and problem-oriented policing. This suggestion, again, is the type of evidence-based information that we need to make sound policy decisions. However, we should not underestimate the difficulty of targeting funding in ways that will prove efficacious. Consider, for example, the Clinton-era initiative to promote funding for community-oriented policing, amounting to an \$8.8 billion allocation during 6 years for the COPS funding provision of the 1994 federal crime bill. Although debate persists regarding the actual number of positions filled under the funding formula (100,000 according to government officials charged with administering the funds, but perhaps as little as 69,000 according to policing analysts), it was nevertheless a substantial allocation that resulted in a significant increase in police resources to be devoted to community policing.

The limited results of this initiative, though, are sobering. A sophisticated analysis by Worrall and Kovandzic (2007: 159) concluded that “COPS spending had little or no impact on crime.” The authors speculated that several factors might have contributed to this outcome. Although the funding allocation was substantial, it only amounted to less than 1% of total police agency expenditures. Also, although the bulk of the funding was targeted to hiring police officers, less attention was paid to the strategies actually employed by police agencies and the degree to which they implemented problem-oriented policing. Thus, it is somewhat difficult to discern whether the relative failure of the initiative was a result of limited funding or of an inability to identify strategies that proved to be more effective. Overall, however, if an initiative as large as the COPS project had only minimal impact on reducing crime, then this outcome gives us an indication of the challenges involved in spending tax dollars in effective ways.

Efforts to promote community-oriented policing also are challenged by having to compete for attention with the high-profile New York City policing strategies promoted in the 1990s in the Giuliani/Bratton era. Although officials in New York have credited these strategies with the bulk of the crime decline since that time, some analysts portray a more nuanced view, which suggests that a confluence of factors came together to produce the declines (Karmen, 2000). In addition, one controversial element of that strategy, the broad expansion of “stop-and-frisk” practices, poses a significant threat to policing strategies that have emphasized the development of constructive law enforcement and community partnerships. Under the “stop-and-frisk” policy, the number of such police actions grew from 160,000 in 2003 to 575,000 in 2009; in some neighborhoods, it is estimated that up to 90% of young Black men have been stopped by the police (John Jay College of Criminal Justice, 2010). In addition, with 90% of the stops not resulting in a summons or arrest, the prospects of creating long-term distrust of the police are significant, especially in

communities with histories of difficult relations with law enforcement. Clearly, not many jurisdictions have adopted such policies to the degree that New York City has, but the city's high profile suggests that challenges will be faced in gaining attention for competing models.

Challenges of Achieving a Shift in Funding and Priorities

As Durlauf and Nagin (2011) point out, even if we believe that the funding shift they propose from a back-end to a front-end strategy would be beneficial, structural challenges are necessary to accomplish this switch. As they note, one complication is that penal institutions are funded by state and federal governments, whereas policing is a local function, and therefore, the funds are not sitting in the same "pot." Even more challenging is how to shift limited funds from criminal justice institutions to social policy initiatives, such as preschool education, in which the direct public safety trade-offs might not be as obvious to policy makers. Nonetheless, it is worth thinking about how these transitions might be accomplished and what obstacles exist to doing so.

In the current era of fiscal constraints, it is difficult to imagine a substantial shift in funding for law enforcement without commensurate cuts in prison funding, but often strong institutional resistance persists to cutting funding for prisons, even when populations are declining. In New York State, for example, despite a 12,000-person reduction in the prison population from 1999 to 2009, it was not until 2009 that state officials could close several prison camps and annexes (Gangi, 2009). Much of this resistance was related to local economics, with the upstate rural communities that had become dependent on prisons for employment (albeit less successfully than many had imagined) fiercely resisting any closures. Unless entire institutions are closed, the marginal cost savings achieved by prison reductions are relatively modest and certainly not at a level that can sustain significant increases for law enforcement.

Fortunately, some history exists of successfully establishing fiscal incentives as a means of shifting the focus of criminal justice programming. In the 1970s, several states enacted community corrections legislation that provided fiscal incentives for counties to supervise certain categories of offenders in the community rather than send them to prison and in some cases established a "chargeback" provision to be employed if counties exceeded their quota of prison beds (Harris, 1996). More recently, justice reinvestment strategies have adopted similar structures. In Kansas, for example, the state legislature offered \$4 million in grants in 2008 to counties that pledged to reduce their technical parole revocation rates by 20%, which most participating counties met or exceeded with no adverse public safety impacts. Therefore, it seems possible that state governments could provide similar fiscal incentives to local police agencies that can implement resource shifts along the lines of the Durlauf and Nagin (2011) proposal.

If we think such incentives might be feasible, then it also could be possible to provide fiscal incentives for research-based initiatives outside the justice system that could contribute

to reducing crime, such as preschool education, improving high-school graduation rates, and substance abuse treatment. For example, reduced spending on prisons could help to support universal preschool programming in local school systems. By expanding the discussion about public safety, such practices also would help to develop a broader base of discussion, one that would involve parents, educators, and social-service providers in a conversation about the appropriate balance of approaches, and thereby gain support for responsible reductions in prison populations.

Impact of a Certainty/Severity Shift on Sentencing Policy and Practice

A key hoped-for outcome of Durlauf and Nagin's (2011) policy proposal would be a significant reduction in the use of incarceration, primarily achieved through reduced crime and therefore reduced prison admissions. Such an outcome would be welcome, of course, but it still leaves us with the question of whether this change would have any effect on sentencing policy. That is, we might have fewer people going to prison overall, but for those who are incarcerated, time served in prison could continue to be excessively long in many cases.

One possibility is that reduced crime would have a positive effect on the political environment for sentencing reform. As we have observed with the generally declining rate of crime since the early 1990s, public safety issues are now not as emotional or politicized as they were in the heyday of the war on drugs in the 1980s. Such a shift in the climate provides policy makers with a greater degree of comfort in considering policy changes that they otherwise might fear would be perceived as "soft on crime" but now can be characterized as evidence-based reforms and as fiscally responsible.

However, it is conceivable that the deterrence strategy shift would have little impact on sentencing policy overall. For many policy makers, a declining rate of crime is clear and convincing evidence that imprisonment "works" and therefore should be sustained at current levels. This perception is common today, but it easily could be assumed in policy-maker circles even at a lower level of incarceration. In addition, fewer people in prison and consequent reductions in overcrowding could reduce pressure on parole boards to use parole release as a "relief valve" for population control. Therefore, although the proposed deterrence shift hopefully would result in less incarceration, it would not necessarily change the overall dynamics of the "tough on crime" era. Such a change in direction is a tall order, of course, and it would be unreasonable to expect it to develop from Durlauf and Nagin's (2011) proposed strategy, but it does serve as a reminder of the scale of the problem of mass incarceration.

Advancing Public Safety—Strengthening Criminal Justice or Promoting Opportunity?

Notwithstanding the potential impact of the proposed shift in policy, we at least should be mindful of the limitations of the shift in regard to an overall approach to public safety.

Therefore, it is useful to examine differences in approaches to crime and incarceration between the United States and other industrialized nations. Although the United States often is portrayed as a lawless nation, in fact, rates of property and nonviolent crimes are comparable with other industrialized nations, with the key distinction being the higher rate of violent crime in the United States (Zimring and Hawkins, 1997). Although the relationship between crime and incarceration of course is complex, at the very least, such outcomes suggest that similar (property crime) or lower (violent crime) crime rates in other nations are clearly not a function of a commitment to mass incarceration. However, neither is it obvious that they result from policing strategies that are significantly distinct from those in the United States. Explanations for the higher rate of violent crime in the United States include easier access to firearms, the particularly lethal nature of drug markets, mass-media imagery, racial and economic inequality, and a more limited social safety net. Clearly, adopting more effective public safety strategies within the criminal justice system is not mutually exclusive with embracing socioeconomic and other societal shifts that would pay public safety dividends, but we should be mindful that criminal justice initiatives represent only one component of an overall approach to public safety.

Conclusion

At a moment when the United States is experiencing a considerably reduced crime rate from the peak of the late 1980s, as well as serious fiscal constraints in public spending, it is opportune to consider how finite criminal justice resources could be used more strategically and effectively. Durlauf and Nagin (2011) have laid out an agenda that provides a research-based strategy for reducing both crime and incarceration. One would hope that such a proposal would be embraced by both policy makers and the public.

The questions raised in this essay are designed to stimulate thinking about the challenges that develop in considering such a policy shift in a political environment as well as in exploring the opportunities and limitations of a criminal justice approach to public safety. Hopefully, such inquiries can help to shift our policy discussion away from the “get tough” climate of recent decades toward a more constructive policy agenda as laid out in Durlauf and Nagin’s (2011) proposal.

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Marc Mauer is the Executive Director of The Sentencing Project, a national nonprofit organization engaged in research and advocacy on criminal justice policy. Mr. Mauer has written extensively and testified before Congress and other legislative bodies. His 1999 book, *Race to Incarcerate*, was named a semifinalist for the Robert F. Kennedy Book Award, and he is the coeditor of *Invisible Punishment*, a collection of essays that examine the social costs of incarceration. Mr. Mauer frequently lectures before a broad range of national and international audiences, appears regularly on television and radio networks, and is an adjunct faculty member at George Washington University. He is the recipient of the Donald Cressey Award for contributions to criminal justice research, the Alfred Lindesmith Award for drug policy scholarship, and the Maud Booth Award for correctional services.

More police, less prison, less crime? From peel to popper

The case for more scientific policing

Peter W. Neyroud

Chief Constable and Chief Executive of the National Policing Improvement Agency, UK

In his lecture at the National Institute of Justice in April 2010, Professor Lawrence Sherman (2010) boldly proposed that governments could have their cake and eat it, reducing the spiraling costs of prison places and yet enjoy continuing improvements in the harm caused by crime. The key precondition that he set out was a need to invest in more effective, evidence-based policing. In their article, Durlauf and Nagin (2011, this issue) build toward similar conclusions through examining what the evidence now tells us about deterrence, its relationship with certainty and severity, and its impact on crime outcomes.

This essay will set out to look at Durlauf and Nagin's (2011) arguments and will seek to examine whether their proposal for a radical shift in criminal justice policy is capable of being implemented. The primary focus of the essay will be on the policing end of Durlauf and Nagin's proposals because this author spent 5 years leading the development of approaches to improving policing in the United Kingdom but also has been involved extensively in the various attempts to reform the criminal justice system in the United Kingdom since the early 1990s.¹ The essay will start with a look at the current context; how fertile is the ground that Durlauf and Nagin are attempting to sow? It then will turn to examine the potential to improve the effectiveness of the police, which is critical to their arguments. It will conclude by looking at the issue of seriousness, a dimension of the challenge of change that they allude to but needs greater attention.

Direct correspondence to Peter W. Neyroud, Cambridge Institute for Criminology (e-mail: neyroudp@gmail.com).

1. The author was the Chief Executive of the National Policing Improvement Agency in the United Kingdom, a member of the National Policing Board, National Criminal Justice Board, an independent review member of the Parole Board, and a member of the Sentencing Guidelines Council.

The Criminal Justice Recession: The Political and Financial Context

It is important to start by placing Durlauf and Nagin's (2011) proposals in their political and economic context. It is a stark context in the United Kingdom. The Coalition government elected in 2010 has placed a high priority on reducing the escalating fiscal deficit caused by a combination of recession and high levels of public expenditure to support the economy and financial system. The impact on the criminal justice system in the United Kingdom is likely to be severe. The real term cut in budgets for police, prosecutors, probation, and prisons between 2011 and 2015 is likely to be the most severe in a generation. The criminal justice system looks likely to contract by approximately 25%. Most Western countries are facing similar challenges, with varying degrees of severity. In the context of Durlauf and Nagin's recommendations for a switch of funding from prisons to police (probation and alternatives to prison), the budget crisis changes this equation to a choice about where and how to disinvest from existing policies. Durlauf and Nagin provide a timely reminder of the need to consider the impact of reducing the perceived risk of apprehension through flawed spending decisions. Rapid cuts in the availability of police to carry out the type of targeted preventive patrols they identified as having a positive deterrent effect, if their arguments are correct, could have the reverse of the crime reduction effect proposed.

The speed, policy process, and politics of criminal justice will not necessarily mean that decisions about disinvestment and, where possible, investment are "based on cumulative evidence from statistically and scientifically sound research" (Durlauf and Nagin, 2011). For a start, the complexity of the linkages between different activities in the criminal justice system, which Durlauf and Nagin ably illustrate, means that it is unlikely that choices will be informed by a sophisticated modeling of the deterrence effects of decisions in the round as opposed to the more specific political and economic impacts of decisions in detail. Moreover, other factors also are in place than simply evidence. Just as it seems that Ministers may be prepared to let the National Health Service pay for homeopathy despite critical studies by the National Institute for Clinical Health and Excellence, it also seems likely that anecdotal and emotional arguments will play an important part in the choices in criminal justice. Mastrofski (2002: 189) argued in a study of police leadership that "the romantic view of police leadership is a powerful force," which he contrasts with the relatively smaller role that driving real improvement plays in policing. It is important not to ignore the power of symbolism and drama in democratic decision making about crime and punishment (Loader and Mulcahy, 2003).

Mastrofski (2002) as well as Loader and Mulcahy (2003) also reminded us how important public opinion is in influencing choices. Ipsos MORI's (2010) extensive polling data on the public's views of criminal justice in the United Kingdom provided some comfort for Durlauf and Nagin's (2011) proposals. At a national level, the U.K. public remains concerned that sentencing might not be effective. At a local level, they are particularly concerned about the impact of local crime and antisocial behavior. The latter, as a study of police responses by the Police Inspectorate has shown (HMIC, 2010), is susceptible

to improved policing approaches—indeed, the evidence-based, targeted approaches and problem solving advocated by Durlauf and Nagin. The former concern might benefit from greater attention to the evidence of effect. However, for progress to be made and sustained, the following key conditions must apply: significant improvement needs to occur in the cost effectiveness of policing; careful attention to the risks from serious offending and serious offenders is necessary. The whole thrust of the argument of shifting away from incarceration toward policing relies on the ability to raise the game of policing. On the other hand, the public's preparedness to accept such a shift away from incarceration relies on the criminal justice system developing more reliable methods of filtering risk. As the Willie Horton case in the United States and a series of badly handled parole cases in the United Kingdom illustrate, the public will err on the side of incarceration if they do not trust the authorities to manage risky offenders effectively.

Improving Policing

Policing is at a crossroads, not just in the United Kingdom and the United States but also more widely. In the 1980s, Harvard University and the National Institute of Justice convened the first “executive session on policing”—a discussion forum about policing that engaged senior practitioners, academics, and policy officials from the United States, United Kingdom, and Australia. The spur for the 1980s' debates was the strong sense that the “professional model” of policing (based around response, operational independence, and technology) was losing the confidence of the public. Research studies suggested that the police had a minimal contribution to make to crime reduction and investigation and that key strategies such as foot patrol did not work. The session provided the impetus for community policing. Instead of trying to fight crime, the police were encouraged to engage communities and to work with them to solve problems.

Since the first executive session, community policing has become a dominant philosophy in policing. However, many variables in policing have shifted. In CompStat, police leaders discovered a means of improving the performance focus of the police. Research on policing has overturned the “nothing works” starting position and has provided substantial evidence for effective policing strategies. However, the costs of policing have increased and, even before the financial crisis began to bite, were becoming a focus for debate. It was against this different backdrop that the second executive session was convened in 2008.² Two years of debates have produced the following consistent themes: the need to move beyond CompStat and community policing; the need for a new “professionalism” based around accountability, legitimacy, innovation, and evidence; the need for national and international coherence; and the role of science in policing.

2. The author has been a member of the second Executive session. See hks.harvard.edu/programs/criminaljustice/research-publications/executive-sessions/executive-session-on-policing-and-public-safety-2008-2010

The author and David Weisburd provoked an intense debate with an article on “science and policing” (Weisburd and Neyroud, in press). The article argues that the police, in general, do not place science at the heart of their education or their practice. This is highly significant for Durlauf and Nagin’s (2011) arguments. If it is the case that junior and senior police officers are not trained to understand, interpret, deploy, and develop evidence-based practice using “statistically and scientifically sound research,” then it is difficult to see how Durlauf and Nagin’s proposals will find fertile ground. Police training is, in fact, primarily law based and experiential, with little, if any, focus on the scientific principles or evidence that might support practice (Weisburd and Neyroud, in press). For a long time, the police have held aspirations to be regarded as a profession without an equal enthusiasm for investing in the development of the sort of systematic body of knowledge, practice, and qualifications that are a distinguishing feature of professions from other occupations. One key area that would have to change, therefore, is a radically reformed approach to police training at all levels.³ This change necessarily would include a new focus on criminology alongside law and skills at initial training, building to an expectation that senior leaders not only would need to understand the research but also would need to demonstrate an ability to apply it in ways that develop more cost-effective delivery.

Linked with this is the second major barrier to change—performance management and the way that police forces are measured. This area has been particularly contentious in the United Kingdom, but the dominance of a managerialist approach to performance management has created challenges across many jurisdictions. CompStat and the Police Performance Assessment Framework have driven a sharper focus on day-to-day and comparative performance (Neyroud, 2008). However, the metrics that they have been based on have tended not to reinforce an evidence-based approach and, particularly in the case of England and Wales, with a focus on “offences brought to justice” (OBTJ), have encouraged an increase in prosecution and consequent incarceration without regard for the relative seriousness of the offenses or the cost effectiveness of the results. Durlauf and Nagin (2011) rightly caution against simple relational equations in criminal justice, but it is worth noting that the focus on OBTJ has been accompanied by a continuing concern about the reoffending rates.

For the police service, performance management systems are a key part of the accountability structure. They provide a framework to describe police effectiveness, even if, at times, that description and its relationship with funding is more ritualistic than evidence based (Collier, 2001). A critical component of delivering Durlauf and Nagin’s (2011) proposed improvements in policing is, therefore, the careful construction of performance frameworks that recognize and incentivize the type of effective and evidence-based practice that they describe. With that needs to go a means of rewarding and recognizing police

3. In September 2010, the author was appointed by the Home Secretary to undertake a fundamental review of police leadership and training in England and Wales.

leaders who practice this technique and innovate. Currently, few incentives are out there to innovate in policing and to engage research in the development of practice. As Weisburd and Neyroud (in press) set out, an innovation that it is properly tested and researched in a randomized control trial might or might not demonstrate significant benefits. In the risk-averse (Flanagan, 2008) (and now financially constrained) culture of policing, few prizes are awarded for failure. Yet Durlauf and Nagin's proposals require a shift of mind-set to constant field experiments as well as a growing development of systematic preventive practice. Weisburd and Neyroud argue that this shift requires a fundamentally different relationship between the academic and the practitioner—a new partnership between clinicians and scientists—which, as Durlauf and Nagin suggest, also needs support from institutions such as the National Institute of Justice.

Seriousness and Crime Harm

A key flaw in the managerialist approach to measuring police performance in the United Kingdom has been the insufficient attention paid to seriousness and crime harm. At its worst, at the aggregated, national level (the one most visible to the public in the published league tables), the system gives equal weighting to the prevention and detection of minor and major crimes or “compares milk bottle theft with murder” (Neyroud, 2007: 2). Apart from disincentivizing chief constables from paying attention to and prioritizing serious crime, the system has proved ineffective at one of its principle aims of driving up public confidence (Neyroud, 2008). It is important that, in seeking to implement an investment switch from prisons to policing, careful attention is given to developing a better approach to ensuring that the most risky offenders are not simply deterred but that they also are detained. The lesson of England and Wales is that it also is important for the public to trust the system and to feel that its priorities reflect their own.

Durlauf and Nagin (2011) remind us that “incapacitation might be appropriate for some criminals” but that “an efficient use of incapacitation requires the technical capacity for prospectively identifying high-rate offenders.” They go on to recognize that the overall fairness of the criminal justice system requires that the process of identification is targeted effectively and proven. They suggest that the work of Berk, Sherman, Barnes, Kurtz, and Ahlman (2009) might be demonstrating such a process. In the latter case, the statistical analysis of a large set of probation records in Philadelphia was used to identify which offenders have high, medium, and low levels of risk of future serious offending. The team has gone on to link the weighting of seriousness with public views, thereby starting to make the links between science and public concerns that will be crucial to securing the legitimacy of the process in their eyes. As Tyler (2007) and others have established, the criminal justice system has to be more than credible numbers and science. A clear sense should be present that the process is fair to the citizens, victims, and offenders.

Berk et al.'s (2009) work needs both replication and development. At present, it has been applied to probation. For it to contribute more significantly to Durlauf and Nagin's

(2011) vision, it needs to be applied to policing and prosecution decisions. The police are the critical gatekeepers to the criminal justice process. It is a process that Petrosino, Guckenberg, and Turpin-Petrosino's (2010) Campbell review of juvenile interventions suggests should be used sparingly; most interventions studied had an adverse effect on offending rates. Achieving a better balance among cost effectiveness, incarceration, and risk argues for the application of a crime harm prediction tool at the point of decision on intervention. The aim here would be to divide offenders into the following groups: those unlikely to commit serious offenses, who should be the subject of minimal intervention; those with a medium risk, for whom tailored, evidence-based approaches should be considered, some of which may involve incarceration; and those whose risk of serious offending is high and who should be the focus of the most effort in investigation, preprosecution, and postprosecution. In addition to severity and certainty, an effective future approach needs to incorporate an effective, evidence-based approach to risk.

Conclusions

This essay has focused on the financial challenges, the problems of reforming the police, and the need to embed risk. This list of obstacles might suggest that implementing Durlauf and Nagin's (2011) vision is implausible. In fact, the reverse is true. Far from preventing progress, the financial landscape provides precisely the "burning platform" needed to accelerate the change. The Western democracies have a simple, but complex, choice between investing in more effective policing and spending on cost-ineffective incarceration. Moreover, policing, faced with the prospect of 25% cuts, has no choice but to change, and an evidence-based, cost-effective future is considerably more attractive than retreating into a "core policing" of responding to emergencies and critical incidents only. But this decision means that policing will have to reform from within, changing its training, leadership development, and performance systems, while being supported by research, education systems, as well as local and national political leaders.

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Peter W. Neyroud has been a police officer in the UK for 30 years, serving in Hampshire, West Mercia, Thames Valley (as chief) and as Chief Constable and Chief Executive of the National Policing Improvement Agency. He has also been a member of the Sentencing Guidelines Council, Parole Board, National Policing Board and National Criminal Justice Board. He is a doctoral research student at the Cambridge Institute of Criminology.

Exploring certainty and severity

Perspectives from a federal perch

Laurie O. Robinson

U.S. Department of Justice

Anyone involved in making criminal justice policy knows that any discussion of serious reform faces perilous challenges. It is not enough that proposals for change be carefully reasoned and philosophically sound; they also must be inoculated against the reflexiveness that too often has characterized our nation's crime and justice debates over the decades. Durlauf and Nagin's (2011, this issue) article represents an important and praiseworthy effort to elevate the discourse.

The article's valuable observations on the feasibility of moving from severity-based to certainty-based policies come at a time when the American public is unusually amenable to moderating sentencing sanctions. A recent poll commissioned by the Pew Center on the States found that 9 out of 10 voters favor reducing prison time for low-risk, nonviolent offenders. The poll strongly suggests that many Americans appreciate the potential value of incarceration alternatives and are willing to reinvest resources in probation, parole, and treatment services so long as those alternative approaches hold offenders accountable (Pew Center on the States, 2010). These findings open the door to those of us who make daily decisions about criminal justice programs and policies and who are on the lookout for innovative and effective approaches.

After serving 7 years as Assistant Attorney General in the Clinton administration, I returned to the U.S. Department of Justice's Office of Justice Programs (OJP) in large part because I recognized that the time was right for a convergence of research and practice in criminal justice. President Obama's promise to "restore science to its rightful place" and Attorney General Holder's commitment to evidence-based practices reflect an unusual respect on the part of government leaders for the role that criminologists and other researchers play in policy discussions. Under their leadership, and with public attitudes

Direct correspondence to Laurie O. Robinson, Assistant Attorney General, Office of Justice Programs, U.S. Department of Justice, 810 - 7th Street, NW, Washington, DC 20531 (e-mail: Laurie.Robinson@usdoj.gov).

ripe for a rethinking of criminal justice practices, we have an historic opportunity to create a robust federal research agenda. Durlauf and Nagin's (2011) points provide a good frame of reference within which to develop such an agenda.

The implications of their findings and recommendations are far reaching. They suggest a fundamental reconsideration of the way legislators, decision makers, and justice system professionals approach criminal justice policy, acknowledging the need for additional research to establish the validity of any actions taken in response to such a philosophic shift. What is striking about such a line of thought is not its logic but the fact that it now can be entertained at all. And there, in my view, is the rub.

For all the great strides criminologists have made over the years, they have yet to make a lasting connection with a wider audience of local, state, and federal practitioners. The federal government bears a fair share of the responsibility for this. The National Institute of Justice (NIJ) was created 40 years ago to build knowledge that would support crime prevention and control. The NIJ has made great strides, but its resources have not been equal to the dual task of establishing a solid evidence base and of translating that evidence into practice.

Durlauf and Nagin (2011) call for, by their own admission, an ambitious program of research, but our ability to answer that call will depend on the level of investment we are willing to make in criminal justice research activities and on the leadership we can provide. As the overall budget of OJP has risen sharply over the years, funding for NIJ has remained almost static. During the years of the OJP's predecessor agency, the Law Enforcement Assistance Administration (1968–1982), the NIJ portion of the overall budget remained at between 3% and 5%; by 2000, it was only 1% of the combined budget of the OJP and the Office of Community Oriented Policing Services. By contrast, the research budgets of the Department of Health and Human Services and the Environmental Protection Agency are approximately 7% of their respective agencies' overall budgets. The recent report by the National Research Council (NRC, 2010), *Strengthening the National Institute of Justice*, describes the dramatic shortfall in budgetary resources in recent years as contributing to the NIJ's inability to fulfill its mission.

One of the top priorities of the Obama administration's Department of Justice is to shore up support for research funding. A key element of the President's fiscal year 2011 budget, now before Congress, is the creation of a 3% set-aside, across almost the entire OJP budget, to be spent for research, evaluation, and statistical purposes (Office of Management and Budget, 2010). This set-aside is in addition to appropriations for the NIJ and the Bureau of Justice Statistics (BJS). This groundbreaking proposal would yield more than \$55 million for science spending on crime and justice, giving research the cachet and priority it now enjoys in other federal agencies.

However, funding is not the only issue. The independence and authority of the research function are also critical. The NRC report points out that the history of the NIJ is a chronicle of diminishing authority and unstable governance, reflecting a pattern of surrendered control

over decision making and a lack of consistent, credible leadership. President Obama has done much to close the credibility gap by appointing two respected social scientists as directors of the NIJ and the BJS. Both were confirmed by the U.S. Senate in July 2010. The NIJ's Director, John H. Laub, is a highly credentialed, widely published authority on the life course of crime, whereas the new BJS Director, Jim Lynch, is a nationally recognized expert on measurement issues in criminal justice data and statistics.

The authority and integrity of the OJP's research role will be enhanced by the forthcoming establishment of an OJP Science Advisory Board. This body, appointed by the Attorney General and made up of academics, practitioners, and other leaders outside of the OJP, will provide advice and counsel on program development and input into the design of long-range plans. It will play a valuable advisory role, but it also will serve as a link between the Justice Department's science agencies and the practitioner communities supported by the OJP's programs. As stated in its charter, the Board will "provide an important base of contact with the criminal justice academic and practitioner communities."

Maintaining close ties to researchers and practitioners—and serving as an arbiter between the two groups—will be the key to fulfilling Attorney General Holder's commitment to the expansion of evidence-based practices. The advancement of the evidence-based paradigm, and validation of the positions proffered by Durlauf and Nagin (2011), ultimately will depend on the strength of the partnerships between the researchers and the practitioners. Several criminologists—although not enough—have joined law enforcement agencies in field test studies of crime and justice theories. This is an uncomfortable step for many academics because it requires a degree of deference to the priorities of the partnering agency. However, these collaborations can yield insights and findings that cannot be achieved any other way, not to mention they can strike a hammer blow to the walls that traditionally have separated researchers and practitioners.

Action research is an opportunity to explore the ideas propounded by Durlauf and Nagin (2011). Among the strategies they cite in support of their position is hot-spots policing, which serves as a prime example of the certainty-enhancing deterrent policies implemented by law enforcement. (However, they rightly point out that more research is needed to explore certainty-based policies put into place by prosecutors and judges.) David Weisburd, Larry Sherman, John E. Eck, and others have advanced our understanding of the great degree to which place, rather than people, can be a reliable source of analysis for crime prediction and prevention. Weisburd's NIJ-funded studies in Jersey City and Seattle show the importance of place-based resource allocation and of law enforcement's proactive and strategic role (Eck, Chainey, Cameron, Leitner, and Wilson, 2005; Sherman and Weisburd, 1995; Weisburd, 1995).

This administration is already embracing these approaches in the programming it is funding. Hot-spots policing is one of the strategies being employed through the Smart Policing Program that the OJP's Bureau of Justice Assistance is administering in 16 cities

across the country. In Philadelphia, police are working with researchers at Temple University to address crime in several micro hot spots where crime is heavily concentrated. The team is testing the effectiveness of three different approaches—foot-based, problem-solving, and offender-focused strategies—at 20 sites each, comparing them with 20 control sites. The Philadelphia project and the other 15 programs enable law enforcement agencies to call in the expertise of researchers to collect and analyze data to help target resources to a particular problem identified by the agencies themselves (Bureau of Justice Assistance, 2010). They also constitute a test of competing program models intended to identify the most effective approaches.

The success of hot-spots policing turns on the ability of law enforcement to present a credible threat of risk for the offender, a point underscored by Durlauf and Nagin (2011). As they emphasize, offenders might give less weight to future consequences of antisocial behavior than other members of the population, so the perceived capacity for justice system actors to make good on a threat of punishment is central to deterrence. This mode of thinking is central to many targeted enforcement programs that have been shown to be successful, notably the gun and drug market intervention strategies pioneered by David Kennedy, which the Department of Justice has helped to support.

Turning to the question of sanctions, Durlauf and Nagin (2011) again invoke principles of certainty. As they put it, “certainty must result in a distasteful consequence. . . for it to be a deterrent.” They cite Hawaii’s Opportunity Probation with Enforcement (HOPE) program as an exemplar of certainty-based sanctioning. An NIJ-funded evaluation of HOPE showed the potential for applying swift, certain, and proportionate sanctions for repeat probation violators. In a 1-year randomized controlled trial, the new arrest rate for HOPE probationers was only 21%, compared with the 47% arrest rate of the control group (Hawken and Kleiman, 2009).

To be sure, more study is needed to determine whether HOPE’s success can be replicated in other, non-Hawaii settings. The NIJ is currently funding an evaluation of a probation-based program in Delaware called Decide Your Time that, like HOPE, applies deterrence through certain apprehension and swift response. In the meantime, the findings from the HOPE evaluation are encouraging, and they suggest a stronger role for the community corrections system. An important element of the HOPE model is its sense of perspective in matters of sentencing severity. Research is calling into question the deterrent value of lengthy sentences. The role that discounting plays in criminal decisions, which is referred to in the article; the attenuated impact of deferred punishment; and the possible criminogenic effects of lengthy sentences are among the empirical evidence that militate against long stays in prison. Apart from the value of incapacitation as a crime-control measure, we have good reasons to reconsider the uniform application of lengthy sentences in cases other than serious, violent crimes in which public safety concerns clearly are paramount. From a policy maker’s standpoint, the economic unsustainability of these practices is one of those reasons.

Both criminological and fiscal factors are influencing a growing movement to reassess corrections practices known as Justice Reinvestment. Justice Reinvestment is a federally supported initiative, whereby state policy makers, planners, and legislators analyze criminal justice policies and determine how funds can be redirected from costly corrections programs to activities that reduce recidivism and, it is hoped, prevent crime. With funding from the OJP, a consortium of groups led by Pew Charitable Trusts and the Council of State Governments Justice Center is working with states to tailor reinvestment strategies. Some remarkable shifts in priorities have taken place as a result, perhaps none more surprising than the revolution in corrections in the state of Texas.

In 2007, the Texas prison population was already 3,000 people over capacity and was projected to grow by more than 14,000 people over the next 5 years. After meeting with legislators, corrections officials, and policy makers, the Justice Center suggested a set of policy options that prevented growth in the prison population and saved \$443 million in fiscal years 2008 and 2009. The state reinvested \$241 million in substance abuse and mental health treatment programs, including problem-solving courts, an action that would have been unthinkable a few years before.

Similarly, Kansas faced a prison population that was expected to increase 22% by 2016, with costs for new construction and operations expected to reach \$500 million. When the Justice Center concluded that parole and probation revocations accounted for 65% of prison admissions, the legislature reallocated \$7.9 million to expand treatment programs as well as to strengthen probation and parole. With a focus on evidence-based treatment strategies and new approaches for dealing with parolees, probationers, and mentally ill offenders, Kansas has cut parole revocation rates in half and has reduced recidivism by more than 20% as well as the total prison population by 4% in just 2 years. Apparently, with strategic planning based on evidence, both crime and imprisonment can be reduced (Council of State Governments Justice Center, 2010).

As the Texas and Kansas experiences demonstrate, Justice Reinvestment—and the willingness to consider criminal justice reform generally—has enjoyed bipartisan support, and this across-the-aisle commitment is evident on Capitol Hill. In January, I spoke at a National Summit on Justice Reinvestment in Washington, DC, that saw participation from Republicans and Democrats alike. The sense of urgency for rethinking criminal justice policies clearly is in the air.

It is easy to become excited about the possibilities for change, especially for someone who has spent her career navigating the rocky terrain between research and policy. Although I maintain that we are at a moment like few others in the history of our field, I have been around long enough to know that opportunities come easily, and they go just as quickly. Unless we embed the mind-set of reform in policy makers and administrators—including, and for me particularly, at the Department of Justice—and until we instill a commitment to resources in the appropriations process as well as to expanding our base of empirical

evidence generally, we will allow our policies to continue to be tossed about by the political winds.

We have the chance to leverage federal leadership to bring about change. We have bipartisan support on Capitol Hill, and we enjoy a commitment from deep within the executive branch. We are building broader support with practitioners and policy makers and are lowering the barriers between criminologists and criminal justice professionals in the field. But important steps must be taken to secure these gains. Durlauf and Nagin (2011) lay out many of these in their recommendations, following closely in time and spirit the NRC report's proposals for strengthening the NIJ.

A crucial step is to continue to connect with practitioners and to translate research for policy makers, which is essential if we seriously hope to transform how business is actually done in the criminal and juvenile justice systems. Last year, with the full support of the Attorney General, I launched an Evidence Integration Initiative (E2I) at the OJP that is designed to help meet this charge. E2I has the following primary objectives: to improve the quantity and quality of evidence that we generate through our research, evaluation, and statistical functions; to integrate evidence more effectively into program and policy decisions; and to improve the translation of evidence into practice (Robinson, 2010).

E2I is an OJP-wide effort intended to help the field better understand what has been shown to work based on accepted scientific principles. As part of this effort, we are working to establish common expectations and definitions for credible evidence across the OJP's grant programs. We discovered, for example, that the OJP's bureaus and offices were not always using consistent definitions for *evidence-based*, which is a poor model for the rest of the field. We have begun to put our own house in order by standardizing a definition in our program solicitations. A small step, admittedly, but it is an important one. We also are expanding our support of randomized field experiments. Although we recognize the utility of other research methods, it is important that we aim for high levels of rigor in research design where possible. Of course, a key goal of E2I has been to ensure better communication of information about evidence-based approaches to the criminal and juvenile justice fields, so our sights are set on maximizing the influence of research on practitioners. Two core elements of the initiative will be a Crime Solutions Resource Center, which will serve as a clearinghouse of information about what works and what is promising, as well as a "Help Desk" or diagnostic center to help jurisdictions adapt evidence-based approaches (Office of Management and Budget, 2010).

Aligned with this mission of translating evidence into practice is a mandate to institutionalize evidence-based decision making in the policy-making arena. We need advocates both within and outside the OJP to promote rigorous research to policy makers and government leaders, including to the leadership of the Department of Justice itself. Our current Attorney General has been a staunch supporter and champion of research, but only by institutionalizing this commitment can we ensure its longevity.

Durlauf and Nagin (2011) are to be commended for their thoughtful and judicious weighing of the evidence. Their tone of restraint belies an enthusiasm for change that, in my view, is greatly needed in our field. To be sure, more research is called for on the effectiveness of specific crime-control treatments, and policy recommendations, as they point out, certainly should “be based on cumulative evidence from statistically and scientifically sound research” rather than on single subsets of studies, no matter how promising the results (Durlauf and Nagin, 2011). However, the energy buoying their arguments is kinetic. We are, beyond doubt, at a watershed, and it is our chance to move the field boldly forward.

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Laurie O. Robinson is the Assistant Attorney General for the Office of Justice Programs in the U.S. Department of Justice.

POLICY ESSAY

I M P R I S O N M E N T A N D C R I M E

Approaches to reducing both imprisonment and crime

Alfred Blumstein

Heinz College, Carnegie Mellon University

The excellent and broad-ranging article by Durlauf and Nagin (2011, this issue) represents a wise policy document that builds on their excellent previous article (Durlauf and Nagin, in press), which provided a strong analysis of the issue of factors contributing to deterrence of offending. In this review, I build on what I see as the strongest points of their article, particularly their contrast of the relative importance of certainty and severity and their highlighting of certainty over severity. That observation, which many would have difficulty challenging today as the United States has the highest incarceration rate in the world, strongly argues for reduction of severity as reflected in the sentences imposed on convicted offenders. In exchange, it argues for using the resources thereby made available for increasing the certainty of punishment to strengthen the deterrent effect. Their primary emphasis is on providing resources to policing as a means of increasing certainty of arrest. This is certainly one important approach to using the deterrent sanction more effectively. But it also opens the door to using those resources in other ways that could contribute to less crime, thereby achieving their fundamental goal of less imprisonment (shorter sentences) and less crime: increasing certainty or pursuing other actions enabled by those resources to reduce crime.

In this essay, I would like to pick up on Durlauf and Nagin's (2011) basic objectives and discuss other approaches that should be considered as part of the policy agenda. It may well be that more and stronger policing is the best way to use those resources, but that case is far less clear than the desirability of reducing severity. Then, there should be examination in a broader systems context of the costs and benefits of a variety of other means of generating less crime.

Direct correspondence to Alfred Blumstein, Heinz College, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213 (e-mail: ab0q@andrew.cmu.edu).

Deterrence

Daniel S. Nagin has been an outstanding and admirably balanced scholar of the issue of deterrence. His initial work in the field as the lead contributor on deterrence to a National Academy of Sciences volume on deterrence and incapacitation (Blumstein, Cohen and Nagin, 1978) provided a strong challenge to work by Isaac Ehrlich (1973, 1975) that claimed to provide evidence of the deterrent effect of incarceration and especially of capital punishment, with a claim that each execution would save eight lives. The basic thrust of the challenges were associated with simultaneity of incarceration affecting crime, but also crime affecting incarceration, an issue of endogeneity not adequately addressed in Ehrlich's work.

Nagin has since published a variety of papers on deterrence, including attention to the role of perception of sanction risk that goes beyond the normal statistical analysis that characterizes most economic analyses of deterrence. He has been called on by *Crime and Justice* (Nagin, 1998) to provide central essays on the status of deterrence research. In this work, he has been particularly balanced in his treatment of the issue, in contrast to much of the economic analyses that argue strongly for their estimates of a deterrent effect, and to recognize the challenges of those estimates (see, e.g., Donohue and Wolfers, 2005), which point out their weaknesses.

In this article by Durlauf and Nagin (2011), Nagin's strengths have been augmented by an excellent econometrician, Steven N. Durlauf, who has done his own work assessing regression analyses used to estimate deterrent effects and has teamed with Nagin to assess the severity–certainty trade-off in their forthcoming chapter and in the development of this article to develop the policy implications of that work.

The Third Component of Deterrence

Even though most discussions of deterrence focus on certainty and severity, it has been recognized that there is a third component in “celerity,” the speediness of the imposition of the punishment, with recognition that a speedy imposition strengthens the deterrent effect. This is particularly applicable in the context of specific deterrence, the deterrence of the individual being punished, in contrast to general deterrence that reflects a concern for the broader symbolic message associated with deterrence.

The issue of celerity has been brought to attention in recent years by a program targeted at individuals with substance-abuse problems. Project HOPE in Hawaii was directed at offenders whose drug dependency was the major cause of their criminal activity. They were put on probation with a requirement to call a central office daily; then, on a randomly chosen day each week, they would be required to come in for a drug test. If they failed that test, they would be sent to jail immediately but for a very short sentence of one or a few days; that sentence would increase slowly for each successive failure. That program saw major reductions of more than 50% in subsequent arrests and detected drug use compared with a control group that was given normal probation (Hawken and Kleiman, 2009).

A similar program was introduced in South Dakota by the Attorney General targeted at driving-under-the-influence (DUI) offenders with multiple convictions. These offenders were required to undergo an alcohol test every morning and every evening, and a failure of that test would lead to immediate consequences.

Opportunities for exploiting the celerity aspects of deterrence do seem to exist, particularly for those individuals who remain under the control of the criminal justice system and commit relatively minor crimes, especially those who do so because of an addiction problem that could be tested frequently and addressed quickly with an immediate response. Durlauf and Nagin (2011) call for replication of the HOPE experiment to provide a test of its feasibility in other settings.

Growth of Incarceration

It would be hard for anyone who has observed the impressive growth in U.S. prison populations during the last 30 years to argue for more severity of punishment. Certainly, some researchers argue that the crime drop from 1993 to 2000 was a consequence of the increase in imprisonment during that period, but that argument is challenged by the crime rise from 1985 to 1993, when the imprisonment was growing at least as fast. Indeed, that decline in the late 1990s was estimated in two different ways (Rosenfeld, 2000 [2006], in an incapacitation analysis, and Spellman, 2000 [2006], in a regression analysis) to have contributed approximately 25% to the dramatic drop of 45% in robbery and homicide. But certainly other processes were at work (including the waning of the crack epidemic and police aggressiveness in taking handguns from the young people who were major contributors to the previous crime rise) to which the growth in incarceration was an augmentation.

A variety of earlier analyses compared certainty with severity, and they generally agreed that the effect of certainty dominated that of severity, but the Durlauf and Nagin (2011) work provides a stronger econometrics test of that conclusion. Despite the widespread and strengthening evidence in support of that position, we have observed since the early 1980s a 6% to 8% annual increase in the U.S. incarceration rate. This followed a period of at least 50 years of impressive stability in the incarceration rate at a level of 110 per 100,000 population (Blumstein and Cohen, 1973) reflecting a homeostatic process (Blumstein et al., 1976) largely controlled by the criminal justice system. It became clear that a major regime change occurred that transferred that control to the political system. That shift was engendered largely by a growing public concern about crime that placed demands on the political process to “do something” about that problem. The repertoire available to politicians and especially legislators is particularly limited, particularly if they are want to show that they are “doing something” quickly, thereby precluding investment in long-term prevention efforts like the demonstrably effective use of home visitation by nurses (e.g., Olds et al., 1998) to enhance the maternal skills of high-risk mothers.

The obvious political solution was to increase punishment, first by introducing mandatory-minimum sentences for those offenders who might otherwise have been put

on probation (thereby increasing certainty) and then increasing the magnitude of those sentences. Thus, at the beginning of the movement, we saw minimums of 2 years that were then escalated to 5 years and later 10 years, particularly for drug offenses in response to public concern about violence in the drug markets and anxiety that their children might be caught up in drug use.

An analysis of the factors contributing to the growth of incarceration between 1980 and 2000 (Blumstein and Beck, 1999, 2005) found initially a small contribution attributable to a growth in crime. It was somewhat surprising in light of the growing sophistication of policing over that period that no contribution was attributable to a growth in arrests per crime. The dominant contribution was attributable to an increase in prison commitments per arrest (a consequence of tougher prosecutors and judges, both affected by statutory pressure from legislatures as well as a political environment that rewarded those who were “tough on crime” and punished those who were charged with being “soft on crime”) and time served, including time served as a result of parole violation. The Blumstein–Beck analyses also pointed to the dramatic growth by a factor of 10 in the incarceration of drug offenders.

Furthermore, the analyses showed that in the early part of the period until 1994, commitments and time served were approximately equally influential, whereas in the later period, time served was roughly twice as influential. As the pressure for longer sentences and violating more parolees became dominant, especially for violent crimes, and as pressure for more community-based programs gave rise to “intermediate punishment” (Morris and Tonry, 1991), especially for nonviolent offenders, led to the development of more such programs.

Many observers looked aghast at the steady growth of incarceration, recognized that it was not very functional but also recognized that punitiveness had become ingrained in the political culture of the time, and observed that seemingly little could be done to reverse that growth. One consequence of the Great Recession has been the budget crisis it created in virtually all the states as their revenues declined, and they began searching for means of cutting expenditures to meet their requirements for a balanced budget. To a large degree, the most rapid growth in expenditures during the past several decades had been for costs associated with incarceration and so that opened the door to rethinking those policies. That slowed the incarceration growth to less than 1% in 2008 and 2009. In 2008, approximately half the states increased their prison populations and the other half reduced them. The largest increase was in Pennsylvania, where the murder of a Philadelphia police officer by a parolee led the governor to close the backdoor by halting all parole releases until the issue could be studied further. This situation highlights the political sensitivity of decisions regarding incarceration—a single heinous event can cause a reaction by key political decision makers that can lead to a dramatic change in incarceration policy. And this came at a time when crime rates were lower than they had been since the 1960s.

Sentencing Guidelines

One means by which the criminal justice system metes out punishment is through sentencing guidelines, which have been adopted in approximately half the states and in the federal system. The guidelines were introduced in the late 1970s and early 1980s with a principal objective of reducing disparity, especially racial disparity, in the imposition of sentences on convicted offenders. Those guidelines vary from narrowly prescriptive to broadly advisory and are typically based on a matrix structure that reflects the seriousness of the conviction offense on one dimension and the seriousness of the prior record on the other. In at least some cases, guidelines were introduced as a means of counteracting the politicization of sentencing policy in state legislatures and moving the policy into a less political guidelines commission. In some cases, the commissions were even told to make their sentencing policy compatible with the available prison capacity. To some degree, the commissions could resist the toughening trends, but they also were influenced by those same forces and ultimately could not represent major resistance to the growth of incarceration.

In the current political environment, with a desire to reduce the cost of incarceration, many states could be looking to their sentencing commissions to help in that regard. If they were to continue to use their current guidelines and adjust them all downward, thereby reducing the severity of punishment, that would likely reduce the costs of incarceration but not necessarily reduce crime. However, the commission could introduce actuarial risk assessment of the individual convicted offenders using other characteristic information about the offender such as employment status, family status, and other indicators of recidivism risk. That could be done within each cell of the guidelines matrix by using the risk-assessment score to indicate departures above or below—preferably below—the specified guidelines sentence.

Of course, introducing risk assessment will inevitably introduce disparity because two individuals convicted of the same crime with the same prior record would now be getting different sentences. Certainly, race or other characteristics of protected classes should not be used in generating a risk assessment score. If that is the case, then the disparity introduced could be reasonable. Thus, such revisions of the sentencing guidelines incorporating risk assessment could be another useful approach to reducing imprisonment at least without increasing crime.

Drug Offenses

Perhaps the greatest factor contributing to the incarceration growth has been the obsession by the political system to deal with the nation's drug problem through incarceration. Drug offenders now represent the single largest offense category in prison, accounting for more than 20% of state prisoners and more than 50% of federal prisoners, with their incarceration rate having grown by a factor of 10 since 1980. Prior to the politicization of drug offending, probation would not have been an unusual sentence. But given the public's concern about children becoming addicted, the natural political response was the introduction of escalating mandatory-minimum sentences.

Undoubtedly, drug abuse has been a serious social problem and has contributed to other crimes of theft by users to obtain the money to buy the drugs and crimes of violence by sellers as a form of competition. But there are profound limits on the degree to which incarceration of drug sellers can disrupt the traffic in illicit drugs. As long as the demand persists, any seller deterred by the increasing threats of punishment or any seller convicted and incarcerated could be replaced. As long as replacements are available, they would serve to nullify any anticipated deterrent or incapacitative effect. This was the thrust of my presidential address (Blumstein, 1993) to the American Society of Criminology in November 1992, shortly after Bill Clinton was elected President, who I hoped would reverse the increasingly futile growth of drug offenders in prisons.

What I did not appreciate at the time was the problems that would derive from the replacements. Marketing of crack cocaine began in the early 1980s as a technological innovation that permitted people with small amounts of money to indulge in the pleasures of crack for only \$5 or \$10, much less than the cost of a minimum quantity of powder cocaine. Crack was marketed primarily by African Americans in their segregated communities. As the market grew and as the market displayed competitive violence, aggressive efforts were pursued to disrupt that market with incarceration. As one could anticipate, replacements were readily available, and so the incarceration had little effect on transactions. The replacements were predominantly young people, as demonstrated by a dramatic growth in the arrest rate of non-White juveniles after 1985. Not surprisingly, these young people were far less restrained in their use of the guns that they had to carry to protect themselves against robbers. Also, their peers in the neighborhood began to carry and use guns, thereby leading to an arms race in those neighborhoods (Blumstein, 1995). That gave rise to a 25% increase in homicides and robberies between 1985 and 1993, virtually all attributable to young African American males with handguns.

Thus, an important counterproductive effect of the incarceration of the drug sellers was an increase in violent crime, primarily attributable to their replacements. Fortunately, the demand for crack declined in the early 1990s as its serious consequences became clear. The young sellers were no longer needed in the market, and they could move into the robust economy that prevailed at the time. All of that, along with aggressive policing taking the guns from the young people, contributed to the decline of more than 40% in murder and robbery between 1993 and 2000.

There remains an important lesson about replacements that still does not seem to have been reflected in current policy discussions regarding the role of incarceration of drug offenders. When the Congress revised the notorious 100:1 crack-powder mandatory minimums (the same 5-year sentence for 500 grams of powder and for 5 grams of crack) to be 18:1, they had the opportunity to make that change retroactive to apply to the many prisoners incarcerated under the old rules but chose not to do so. It is clear that as the states are scrambling to revise their incarceration policies because of their requirements for balanced budgets, but the corrections costs are a small part of the federal

budget, and so the pressure on the Congress to reduce prison populations is appreciably less.

But the door is certainly open to both the states and the federal government to rethink their incarceration policies, especially regarding drug offenders. California initiated that rethinking as a result of Proposition 36, which led to The Substance Abuse and Crime Prevention Act of 2000. That Act mandated that first-time drug offenders should be offered treatment as an alternative to incarceration and, thus, has saved many millions of dollars of incarceration costs. This would seem to be an ideal time for many other states and the federal government to consider similar possibilities.

An impressive study involving systems theory by Tragler, Caulkins, and Feichtinger (2001) highlighted the need for using different treatments for the drug problem at the early stages of an epidemic before the practice is widespread compared with the late stages when abuse and addiction involve large numbers of people. At the early stages, vigorous enforcement may be sufficient to quench the growing epidemic. At the late stages, enforcement is inherently too limited to become an important factor to contribute very much to reduction of the epidemic, and so an investment in treatment becomes the most appropriate approach. For most drugs in the United States, we are at that latter stage, and so significant increases in investment in treatment is much more warranted and a much better use of the \$25,000–\$30,000 annual cost of incarceration.

Investment in Research

One of the important contributions of the Durlauf and Nagin (2011) article is the research agenda to which they devote approximately 20% of their article. In general, their suggestions are strong and do a good job of covering the range from some necessary basic research, which should be an important part of any programmatic research endeavor, as well as policy research intended to test a variety of approaches or to develop better estimates of parameters that should be influential in shaping policy. One would think that those research suggestions would be particularly valuable in shaping the agenda of the National Institute of Justice during the coming decade.

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Alfred Blumstein is the J. Erik Jonsson University Professor of Urban Systems and Operations Research and former Dean of Carnegie Mellon's Heinz School of Public Policy and Management. He has had extensive experience in both research and policy within the criminal justice system since serving as Director of Science and Technology for the President's Crime Commission (1966–1967). He was Chair of the Pennsylvania Commission on Crime and Delinquency, and he served as a member of the Pennsylvania Commission on Sentencing. He was President of the American Society of Criminology (ASC) and received its Sutherland Award for research contributions. He has been honored with the 2007 Stockholm Prize in Criminology. His research has covered many aspects of criminal justice phenomena and policy, including crime trends and measurement, criminal careers, sentencing, deterrence and incapacitation, prison populations, demographic trends, juvenile violence, and drug-enforcement policy.

Coproduction in deterring crime

Philip J. Cook

Duke University

Steven N. Durlauf and Daniel S. Nagin (2011, this issue) argue persuasively that long prison terms are an inefficient way to control crime. They conclude that a reallocation of existing resources from prisons to policing could reduce crime rates if the prison budget cuts came in the form of reduced use of long prison terms. Their article offers support and precision to a long-held tenet of criminology—that would-be criminals are more likely to be deterred by an increased probability of punishment than increased severity.

In this policy essay, I expand their thought experiment to bring in the role of private citizens. The effectiveness of the police in threatening punishment for crime is greatly influenced by private inputs, particularly the provision of timely information and cooperation after arrest. Private choices also are the primary determinants of the ecology of criminal opportunities (Cook, 1986). Thus, private action combines with public law enforcement resources to coproduce crime control. If the goal were to enhance the deterrence effect, then it would pay to consider ways to encourage private inputs into crime control.

Criminal Opportunity and Deterrence

Before turning to some specifics on how to mobilize private inputs, it is useful to emphasize one aspect of Durlauf and Nagin's (2011) commentary on deterrence. The usual image is of the potential criminal who is faced with a single criminal opportunity that is characterized as if it were a lottery ticket in reverse—a payoff, together with some probability of punishment. Of course, in reality, myriad criminal opportunities differ with respect to the risks to the criminal (of arrest or effective resistance), the payoff, the amount of skill and planning required, and so forth. What we observe in the police statistics on clearances for robbery, for example, is not "the" probability of arrest for robbery but the average of the probabilities associated with the robbery opportunities that actually were exploited (Cook, 1979). From

Direct correspondence to Philip J. Cook, Duke University, Sanford School of Public Policy, Durham, NC 27708 (e-mail: pcook@duke.edu).

this perspective, it makes sense to recast the objective of law enforcement (and police work in particular) from increasing the mythical probability of punishment to limiting the number of attractive opportunities available to criminals.

The intensity of police patrol in a neighborhood might be relevant to this purpose, but so are private actions, including private efforts to protect valuables and avoid violent encounters. Private action is also important after crimes are committed; cooperation by private citizens (usually beginning with the victim) is often a precondition for a successful police investigation and prosecution. Households and businesses also might take prior actions that will enhance the chance of arrest in the event of a crime, including hiring security guards, equipping vehicles with an electronic tracking device, installing silent alarms, keeping detailed records to identify property, carrying a mobile phone, and much else. Thus, much private action complements public law enforcement (Cook, 2009).

The Victim's Role

Of course, citizen cooperation is not always forthcoming; indeed, most serious crimes are never reported to the police. The obvious reason why is that reporting a crime is, in most circumstances, a public service provided at some private cost (and risk) and little benefit. The exception supports the rule; motor vehicle thefts usually are reported, presumably because vehicle owners (unlike other theft victims) can expect that the police will be successful in recovering the vehicle, and in any event, the vehicle-insurance company requires that the police be notified. For other crimes that lack this incentive, citizen cooperation is undersupplied.

Greater attention to victim well-being in recent decades might have been successful in encouraging victim cooperation, although much more needs to be done. The victims' rights movement began during the 1970s. Then President Reagan appointed a task force that offered more than 60 action recommendations that "encouraged the expansion of victim services and suggested practices to make the criminal justice process and related victim service delivery system more 'victim friendly'" (Tobolowsky, 2001: 9). The report helped to inspire state and federal legislation. "Currently, the federal government and all of the states have statutory victim compensation programs and restitution provisions which authorize restitution as a probation condition or as an independent sentence, or both. A victim right to restitution is also included in several of the state constitutions" (Tobolowsky 2001: 11). Since 1984, the federal government has provided states with grants to support victim compensation and victim services.

Victim compensation programs currently tend to offer less than meets the eye, although they do play a role. The first program was created in California in 1965, and the idea spread rapidly (with a federal assist in the 1980s). They have been operating in every state since at least the 1990s. In these programs, the government is typically the payer of last resort and

only for certain expenses incurred in violent crimes, which include medical expenses not covered otherwise, some lost wages, and funeral expenses. They have garnered little public notice. In fiscal year 2009, California reported approximately 200,000 serious violent crimes and received 54,572 applications for compensation, paying out \$94 million, or approximately \$1,700 per claim (boc.ca.gov/docs/stats/CountyCompApps.pdf). We know of no evaluations of victim programs from the point of view of whether and how much they induce reporting and cooperation.

In any event, it is an intriguing fact that crime-reporting rates have been trending upward for the last 30 years (Baumer and Lauritsen, 2010; Cook and MacDonald, 2010). In addition to the victims' rights movement, improvements in police performance might have played a role. It is relevant that "the percentage of citizens who rate the police highly in terms of honesty and ethical behavior has risen from about 37% in the mid-to-late 1970s to about 61% by the middle of the present decade" (Baumer and Lauritsen, 2010: 137). In that sense, policing is complementary to private action and vice versa.

Other Policies to Increase Private Inputs

In recent years, conditional cash transfers have been touted as a potentially effective ingredient for a variety of social programs that are intended to change private behavior (Corby, Roll, Ledgerwood, and Schuster, 2000). The possibility of paying for information that would be helpful to law enforcement is not a new one; for example, the national nonprofit organization CrimeStoppers got its start in 1976. Community chapters of CrimeStoppers collect private contributions and use the funds to pay rewards (up to \$1,000) for anonymous information leading to arrest. Other "tip" programs have been set up by police departments, focusing on particular problems such as illegal gun possession. In a sense, it is difficult to see how such programs could not be cost-effective, assuming they are well managed, because a tip that is the key to arresting a perpetrator of a serious crime is presumably worth far more than \$1,000.

Although I am not aware of any formal evaluation of tip programs, two types of public-private coproduction have been shown to pass the cost-benefit test: LoJack and private security in business improvement districts (BIDs).

LoJack

The LoJack system provides law enforcement with information that is of immediate use in recovering stolen vehicles and, more important, in arresting thieves and chop-shop operators that handle stolen vehicles. Lojack is installed at the dealership for a one-time cost to the owner of approximately \$700. It consists of a small FM radio transponder that can be hidden in 1 of 20 different places on the vehicle and is switched on after the police have been notified of a theft. It then sends a silent signal to local police vehicles equipped with LoJack vehicle tracking units. Lojack-equipped stolen vehicles have a 90% recovery rate, compared with a 63% chance of recovery of vehicles that lack a tracking system (Helperin,

2009).¹ More importantly, from a social benefit perspective, it serves as a powerful deterrent to car theft; Ayres and Levitt (1998) found that each dollar spent on LoJack resulted in a reduction in the costs of auto theft of approximately \$10. The substantial reduction in the rate of auto theft associated with the introduction of LoJack into a city, even with market penetration amounting to a few percentage points, seems to result from its ability to assist law enforcement in making arrests of professional thieves and chop-shop owners—individuals who might be active in this market and not otherwise likely to be arrested. A thief who steals 100 vehicles per year is almost sure to steal at least one LoJack-equipped vehicle even if only 2% or 3% of all vehicles are so equipped because the thief has no indication of whether any particular vehicle is equipped. Interestingly, LoJack enhances the deterrent effect by prohibiting any visible indication that LoJack has been installed.²

Although LoJack provides owners with some reduction in expected theft loss, the main beneficiaries of an individual's decision to acquire LoJack are the public at large as well as the insurance companies if rates for comprehensive insurance do not adjust to reduced payouts. Ayres and Levitt (1998) estimated that the positive externality of one LoJack device is more than \$1300 annually. Although this value is somewhat less in cities with relatively low rates of auto theft, it seems that it would be in the public interest for additional regions to license LoJack and for individuals to be subsidized or otherwise encouraged to install it. In a few states, most notably Massachusetts, insurance companies are required to provide a discount on premiums for comprehensive insurance, and some companies provide such a discount voluntarily. However, the company that insures an individual who installs LoJack only enjoys a fraction of the benefit (in proportion to their market share) and is unlikely to pass on anything like the full social value to the premium holder.

BIDs

The second type of private action that has been well evaluated is the security investments of a BID. BIDs offer an interesting example of private action that combines situational crime prevention with a close working relationship with the police. These self-taxing entities raise money to pay for private security guards, to combat disorder, and generally to repair “broken windows” directly while also advocating for improved policing and other city services (MacDonald and Stokes, 2006). Services provided by BID organizations within a defined district typically supplement those provided by public agencies. BID services often include trash collection, private security officers, and CCTV cameras as well as marketing

1. See also Ayres and Nalebuff (2005).

2. Gonzalez-Navarro (2008) analyzed the results of a program in Mexico where some Ford models in some states were equipped with LoJack at company expense. The result was to cut theft rates for those models by more than half without displacement to other models. But geographic displacement did occur; states not included in the LoJack experiment experienced an increase in theft for the included models.

and place promotion and development planning. BIDs exist in urban areas “to make places attractive—safer, cleaner, and more marketable” (Mitchell, 2008: 3).

Several recent evaluations of BIDs in Los Angeles have found strong evidence that they have been effective in reducing crime rates (Brooks, 2008; Cook and MacDonald, 2010). My study with John MacDonald found that the social benefit from these BIDs is a large multiple (conservatively estimated as 20:1) of the private expenditure on security. This impressive gain does not come at a cost to the public; indeed, the number of arrests has decreased along with the crime rates. The private security services then are highly complementary to public security.

What is required in this case is not public expenditure but legislative action to encourage the development of effective BIDs. Effective BIDs began to appear in Los Angeles after state and local legislation was adopted that facilitated their creation and the collection of fees from member businesses.

Conclusions

Durlauf and Nagin (2011) make a persuasive case that current criminal justice resources could be reallocated to strengthen the deterrence process. In particular, they suggest that moving resources from prison (and long prison terms in particular) to police could reduce crime. One goal of expanded policing is to deter crime through controlling tempting criminal opportunities (i.e., opportunities for a payoff with little risk of arrest and punishment). My main point in this essay is simply that the police do not act alone in this regard. Police effectiveness depends to a considerable extent on private action, and in important respects, the police and private citizens coproduce crime control. Evaluation research has demonstrated that expanding certain types of private action easily passes a cost–benefit test and can be facilitated through regulatory changes and perhaps by redirecting some resources currently devoted to housing geriatric prisoners.

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Philip J. Cook is ITT/Sanford Professor of Public Policy, Economics, and Sociology at Duke University. He served as director and chair of Duke's Sanford Institute of Public Policy from 1985–89, and again from 1997–99. Cook is an honorary Fellow in the American Society of Criminology and in 2001 was elected to membership in the Institute of Medicine of the National Academy of Sciences.

On the pitfalls of spurious prudence

Elliott Currie

University of California, Irvine

Durlauf and Nagin (2011, this issue) have performed a helpful service in providing an often insightful review of the evidence on a subject that is extremely important for criminal justice policy. The imbalance between our investment in increasing the severity of sentences versus trying to achieve deterrence by increasing the certainty of punishment—especially through more effective policing—is one of the defining characteristics of the last several decades of American criminal justice policy, and one that arguably has helped to give us both the highest rate of incarceration on the planet and the developed world's highest levels of serious crimes of violence. They give us both a useful tour of some relevant empirical research and an informative exposition of some theoretical issues, as viewed from the vantage point of the economist. Their critique of the limitations of aggregate research on the deterrent effects of incarceration is cogent and well stated. Their main point—that an intelligent crime policy needs to shift resources away from increasing already lengthy sentences toward effective policing that could provide more deterrence at less cost—is an important one, and one I certainly agree with (as far as it goes).

But I have to say that I finished this article with a certain amount of unease and more than a little frustration. Let me suggest a couple of reasons why.

The first reason has to do with the remarkable tentativeness of many aspects of their argument, which by the end of the article has led them into a stance that is so thoroughly qualified that it is not always easy to know exactly what they are willing to say with any conviction. The result, I fear, is to make a strong case seem weaker than it really is.

As Durlauf and Nagin (2011) note early on, the argument is not new. In fact, I would put this more strongly: the idea that simply increasing sentence lengths amounts to an effective strategy to control crime has been rejected by most criminologists for a long time, and the corollary that we can use the criminal justice system more effectively to control crime by shifting resources to certainty—especially by supporting some kinds of police

Direct correspondence to Elliott Currie, University of California, Irvine, 2301 Social Ecology II, Irvine, CA 92697-7080 (e-mail: ecurrie@uci.edu).

strategies—also has been made, often forcefully, for some time (I began making it myself beginning in the mid-1980s, and at that time, I merely was building on what others had said already). Likewise, the evidence on the criminogenic effect of incarceration specifically has been accumulating for decades, and the idea is, of course, at least as old as Bentham.

Durlauf and Nagin (2011) obscure the longevity and durability of this body of theory and research by stereotyping the nature of the existing debate on the uses and limits of criminal sanctions in reducing crime. Early in the article, they tell us that the discussion about deterrence so far has been split between those people (mostly economists) who argue that “sanction threats always deter” versus those (mostly criminologists) who argue that “sanction threats never deter.” But I do not actually know many criminologists, if I know any, who really believe that sanction threats never deter (even formal ones—not to mention informal sanctions, which Durlauf and Nagin do not discuss). And though I am not an economist and do not spend all that much time with them, I have the distinct feeling that not many economists who seriously study crime would say that sanction threats “always” deter without severely qualifying that statement. This point is not a quibble. Framing the discussion this way—as if the idea that there might be variations in the effectiveness of different kinds of criminal justice sanctions is a new and controversial one—minimizes the extent to which these issues in fact have been theorized and empirically studied already and, thus, downplays what we can credibly say we know about them.

But the reality is that it is not so much that we never thought of these ideas before but that despite the accumulation of evidence, and despite what I would describe as a fair degree of consensus on the limits of severity and the potentials of certainty, we have not been able to translate those views consistently into public policy. This does not mean that we should stop testing and discussing the ideas. It does mean that we need to consider why we keep having to bring them up all over again as if they were new: and I believe that this article, for all its skill and thoughtfulness, might illustrate some of the reasons why we have had less impact in moving these ideas into public action than their durability and credibility might lead us to expect.

The tentativeness is a big part of the problem. Durlauf and Nagin (2011) begin the article with some fairly straightforward assertions about how we can achieve more deterrence at less cost by shifting resources to targeted policing. But by the end of their article, things have become a lot murkier; they are unwilling to say anything very strongly other than that making already lengthy sentences more severe is not an effective way to reduce crime (as opposed to lengthening shorter ones?). They have more or less retreated from saying anything definite about the virtues of investing in any specific police practices, while opening the possibility that giving out lots of shorter prison sentences might be a good thing after all and that incapacitation effects might make longer sentences for young offenders worthwhile (indeed, they have also resuscitated the idea of selective incapacitation as part of the solution to the costs of imprisonment, without mentioning why we pretty much threw that idea out back in the 1980s). They have chosen to “not pursue” the idea, which emerges from

their own review of the evidence, that it might be the “fact of imprisonment,” rather than the “length of imprisonment,” that accounts for incarceration’s frequent counterproductive effects, a possibility that, they suggest, points to the “radical” idea that “sanctions other than imprisonment should be used” in some circumstances. This is “radical”? Surely the question of whether we should be using imprisonment at all for the broad range of offenders we now use it on should be a vital part of any discussion of criminal justice policy—especially in an era in which we have been jamming prisons across the country with low-level offenders who are sentenced for relatively short terms for generally inconsequential crimes. Indeed, several states have already made important policy changes motivated by that very question, especially when it comes to minor drug offenders (California’s Proposition 36 immediately comes to mind). What keeps us from putting that issue forthrightly on the table here?

Now if the key issues really were so uncertain, then such hesitancy would not be out of place. But surely after decades of research and reams of findings, not to mention the damning evidence of 40 years worth of relentless prison growth, we no longer need to be so tentative about the relative ineffectiveness of mass incarceration as a strategy of crime control or about the potential attractiveness of alternatives. We are capable of saying something a bit more compelling than “in principle there is no logical requirement that lower crime means higher imprisonment.” To be sure, there is a danger of hastiness in social policy discussion and of shooting from the intellectual hip. Less talked about is the danger of what we might call “spurious prudence”—the tendency to downplay the sheer heft of the accumulated evidence, however imperfect any particular piece of it might be.

The danger of spurious prudence is that in presenting ourselves as if we have less to say than we really do, we give the impression that we have little to offer those in the world of policy who are looking for guidance about what to do, and especially about how to spend limited public resources. I worry that arguments phrased as gingerly and sometimes as confusingly as these might leave policy makers simply scratching their heads—as well as many practitioners or members of the concerned public, assuming that these ideas reached them at all. In response, these people might throw up their hands and conclude that nobody really knows much of anything about these issues, or perhaps worse, they might go looking for others who claim they do—and find them.

I submit that, at our current level of understanding, the reasons why we largely have failed to turn back the destructive overuse of sentencing severity as our chief crime-control tool has less to do with the lack of technical knowledge than with the lack of political efficacy, and that inability to move the political climate is partly (although, of course, not wholly) the result of our inability as scholars to affect public awareness significantly and to win hearts and minds for a different approach to crime—one that indeed should involve, among many other things, the shift of resources that Durlauf and Nagin (2011) suggest. But to make that happen, we will need to be both more forceful and more clear in what we say about what we know.

My second concern is related. It involves the authors' decision to sever their discussion of the virtues of investing in one kind of deterrence versus another from any consideration of the other alternatives (i.e., alternatives outside the criminal justice system), including those that address the conditions that cause crime in the first place. Durlauf and Nagin tell us that, "We restrict our attention to changes in sanction policies," even though "nonsanction" policies might work, too. Why? Partly because "non-sanction-related policy alternatives have received considerable attention elsewhere" (presumably unlike sanction policies themselves?), but more importantly because "shifting resources from the criminal justice system to other activities such as education or early childhood development in our judgment would pose far more daunting institutional and political challenges to justify to policy makers."

I confess that, when I read this passage, my heart sank. We have fallen into this trap more often than I could count. It is impossible to think intelligently about the costs and benefits of any crime policy unless we look at it more holistically—in the larger context of costs and benefits relative to what? It is reasonable to say that we will focus for the moment on just one piece of that larger picture because of constraints of time or space; but that is not the argument Durlauf and Nagin (2011) make. The argument they do make gives me a sense of *déjà vu* all over again. We have heard this kind of justification for putting non-criminal-justice prevention strategies off the table for as long as I have been in the criminology business, as if we will get back to the subject later, or someone else will. But history tells us that that is naïve, and it is a naïveté, moreover, that has helped to usher in the turn toward mass incarceration in the first place. Once the focus is restricted to variations within different strategies of control and punishment, the discourse has shifted away from the social, familial, economic, and communal sources that drive the crime problem to begin with. It is not accidental that the rise of such narrow approaches to cost-benefit analysis tends to coincide temporally with the relative abandonment of social approaches to reducing crime and their displacement by a growing reliance on the criminal justice system.

Even as a practical matter, the idea that it is simpler and less "daunting" to talk about shifting resources from prisons to police than, for example, from prisons to early childhood programs does not stand up to scrutiny. Durlauf and Nagin (2011) acknowledge that the "mechanics" of shifting resources from prisons to policing are actually very difficult institutionally because prisons are primarily a state and a federal function, whereas policing is primarily the business of local government. But they then insist that shifting resources among criminal justice agencies should be easier than shifting them between the justice system and other institutions because both prisons and police are understood by policy makers as "components of an integrated system to control crime and punish wrongdoing." But I don't know many state officials who think of state criminal justice responsibilities that way or who spend a lot of time thinking about integrating local police strategies with state correctional ones (or have the power to do so), although I do know many who think, often, about the importance of striking a balance between spending on prisons and spending on,

for example, programs for kids—and who have some influence over how that balance plays out in the real world. Where I live, that kind of policy discussion is a very real one. And that is as it should be.

I am not at all suggesting that we should stop studying variations in the effectiveness of different kinds of criminal justice strategies, but I am suggesting that deliberately narrowing our focus as a matter of supposed political practicality or institutional feasibility is a dangerous and ultimately self-defeating choice. It confines the discussion to ways of managing levels of crime whose origins are bracketed from consideration and, hence, are placed outside the serious discussion. In the real world, this focus cannot fail to have predictable consequences in terms of resource allocation.

The choice in this case might be spurred in part by that same tendency toward “spurious prudence” I have noted. Early in the article, when discussing their decision to focus only on the costs and benefits of different sanction strategies, Durlauf and Nagin (2011) acknowledge—sort of—that other approaches besides sanction policies also might reduce both crime and the costs of incarceration. “Imprisonment and crime might be reduced by making greater investments in non-sanction-related policies.” Might? That is an odd understatement of what we can say with some confidence about the evidence on a variety of strategies of social and personal intervention, including, but hardly limited to, the one they point to—certain early childhood development programs. I will repeat: It can be dangerous to overstate what we know about what can work or to say the wrong things work. But it also is dangerous to minimize what we know. The consequences of doing so are often subtle and overlooked, but they are very real indeed. The logic of spurious prudence works in support of the status quo, and if the status quo is wasteful and destructive, then spurious prudence is implicated.

A good crime policy, in short, cannot simply weigh how much to put into prisons versus police, but also must consider how much of either merits our investment versus, for example, family support programs, job creation, and much more. The opportunity costs of not doing these other things must factor into how we think about the costs and benefits of devoting resources to either prisons or police. Money that we spend on a deterrence strategy, whether severity-oriented or certainty-oriented, is money that is not available for creating jobs for alienated 18-year-olds or preventing child abuse. That is even more true in a time like ours, when budgets are so horrifically constrained on both state and local levels in so many places. In that world especially, we need to know not only what might work but also what works best and, at the same time, what fits best with our values and with our vision of the society we wish to achieve.

Durlauf and Nagin (2011) are surely correct that it is better to prevent people from committing crime through a visible police presence than to wait for them to commit it and then put them behind bars: but how much better, by the same token, to prevent crime by reducing people’s propensity to do it in the first place. From a practical standpoint, we cannot blanket our streets (much less our homes) with police and, hence, relying overly on

their presence to prevent crime is bound to be a losing game: but even more importantly, the implications for the health of the society and the goals of justice are crucially different. It is one thing to prevent crime by improving social conditions or by making people more capable and productive; it is another thing altogether, and I would argue a lesser thing, to prevent it by frightening unproductive, desperate, and alienated people with the threat of arrest and incarceration if they break the law.

This does not mean that we should not put the resources that we need into deploying police more effectively; I've said as much for 25 years. It does mean that we need to situate how we think about resources for policing in the context of a larger strategy for creating a healthier and safer society that also includes what we might call "deep" prevention. Feeding prisons until they are swollen and dysfunctional while starving police is a recipe for failure as well as a massive waste of social resources. Durlauf and Nagin (2011) deserve credit for assembling some evidence that shows why. Now, I would like to see that kind of evidence—and more—fashioned into arguments that are made more strongly and are disseminated more effectively and that can spur the political action that we need to turn around decades of failed criminal justice policy. And I would like to see that discussion folded into the larger, more urgent issue about how to build communities that need less "deterrence" in the first place.

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Elliott Currie is Professor of Criminology, Law and Society at the University of California, Irvine. He is the author of *Confronting Crime, Reckoning: Drugs, the Cities and the American Future*, *Crime and Punishment in America*, and *The Roots of Danger: Violent Crime in Global Perspective*, among other works on crime and social policy.

Optimistic deterrence theorizing

The role of timeliness, court dysfunction, and community alienation

John S. Goldkamp

Temple University

Durlauf and Nagin (2011, this issue) make the argument that increasing the certainty of sanction in the deterrence formula for reducing crime holds greater promise than (continually) increasing severity of sanction (i.e., length of imprisonment). This position in itself is not new, but it is still worth absorbing. Moreover, the proposition that shorter (less severe) but more certain sanctions should also translate into reduced use of imprisonment in the aggregate seems hopeful—though arguable. Instead, once popular, would more frequent use of shorter prison terms generate roughly the same overall use of confinement, only with a confinement population with more rapid turnover? It is possible that more rapid turnover may have other positive effects, such as disrupting the criminogenic effect of the prison subculture, which may depend on populations of inmates that turn over more slowly. This essay takes issue with the assumption made by the authors that improved sanction certainty can best be achieved by reallocating justice resources to the policing function, enhancing apprehension risk as a key to deterrent impact. More specifically, the Durlauf-Nagin proposal overlooks two interrelated obstacles given little attention in discussions of deterrence: the timeliness¹ of sanction delivery and the role of court process in sanction delivery. Both represent challenges to communication and delivery of sanction threat and to production of deterrent impact.

Deterrence is not only a function of severity and certainty of sanction but also of its timeliness. Timeliness and certainty are closely tied conceptually in the formulation of deterrent effect. Timeliness of sanction in the deterrence formula appears mainly to be

Direct correspondence to John S. Goldkamp, Department of Criminal Justice, Temple University, Gladfelter Hall, Rm. 525, 1115 W. Berks St. Philadelphia, PA 19122 (e-mail: goldkamp@temple.edu).

1. Bentham refers to this as “remoteness” or “propinquity” or sanction that is “speedy” (Bentham, 1781 [1988]); Beccaria refers to timeliness as “promptness” of punishment (at least in translation (1764 [1963])).

taken for granted, perhaps reflecting a belief among deterrence theorizers that timeliness is simply inconsequential, or is simply considered a facet of certainty, a second side to the same conceptual coin not requiring its own consideration. Whatever the explanation for the lack of attention, timeliness is indeed critical both in theory and in practice in understanding the production of deterrent effect.

A sanction that is delivered with certainty yet after an extended period of time (that is, delayed but without doubt of eventually occurring) is unlikely to serve as the effective object-lesson sanction that deterrence requires. Certain but untimely sanctions are likely to be perceived as uncertain, given the likely short-term time horizons of the potential offender target population for whom the sanction example was intended. Imagine the example of a rape that received wide publicity in the community but then which took 3 years to produce an arrest, a prosecution ending in conviction, and then having a lengthy prison sentence imposed. Even granting certainty throughout (that an offender was located, convicted, sentenced, and then actually sent to prison), is it likely that the intended target audience of like offenders would have had the time horizons to connect “the dots” of a steady process, then to draw the deterrence lessons of sanction theoretically sent by the justice system? More extensive scenarios, all granting certainty and severity of sanction while ignoring timeliness of sanction delivery, can be easily designed to convey the point that lack of timeliness will undermine effects of certainty—particularly as the perception of hopelessly lengthy court procedures becomes lore among the targeted potential offender population. Failure to consider the potential impact of timeliness on certainty and the role of the court process in fostering delay both undermine the credibility of the proposition that enhanced certainty in combination with reduced severity in sanctioning (shorter imprisonment terms) will reduce imprisonment use overall. The uncertainty associated with court processing dispositions weakens the argument that the supposed strengthened deterrent capacity delivered via an enhanced risk of apprehension capacity by police will reduce crime as a consequence. Court process in its neglect and clumsiness of performance poses an important obstacle to the deterrence requirements of sanction delivery.

In general the deterrence discussion has given only a slight nod in theory and measurement to the role of the criminal court—insufficiently and unidimensionally represented as probability (risk) of conviction and of punishment—which is assessed as contributing a significant but marginal impact. More than three decades ago, the National Academy of Sciences report from the Panel on Research and Deterrence rather cursorily dismissed a role for court process in affecting deterrence capacity in writing that “considerable uncertainty surrounds the interpretation of the evidence for the effect of conviction risk” (Blumstein, Cohen, and Nagin, 1978: 44). To build their argument that the best hope for strengthening deterrence certainty lies at the policing stage (i.e., by improving apprehension risk), more than 30 years later, Durlauf and Nagin (2011), perhaps unsurprisingly, echo the Deterrence Panel in again acknowledging an uncertain role for court process, this time pointing to the uncertainty of its outcomes while still not giving

this major component of the sanctioning process full consideration. The lack of attention given to the role of the court process in the 1978 report can be traced to the research assessment orientation of the Panel. The Panel reasoned that, if little research addressed court process functions relating to deterrence, few conclusions were warranted.

More than 30 years later, Durlauf and Nagin (2011) again do not give weight to the role of court process except, in general, as it undermines certainty of sanction: “[the offender] next must be charged, prosecuted successfully, and finally sentenced by the judiciary. None of these successive stages in processing through the criminal justice system is certain. . . . Relatively little research is available on the deterrent effect stemming from the certainty of prosecution or sentencing to prison conditional on apprehension.” The effect of this analytic approach, implicitly at least, is to treat the criminal process (all that happens between the policing and imprisonment stages of the criminal process) as a “black hole” that is not relevant to assessing deterrence delivery capability. In fact, it is much more relevant and much more complex to deterrence postulations. In failing to realistically consider the potential effects of court processing actions, analysis of what really counts in producing deterrent impact is reduced in Durlauf and Nagin’s treatment to two arenas, policing and imprisonment. Because shorter (and somehow more certain) prison penalties are being proposed both as an instrument of policy and as an outcome, policing survives as the most promising center of deterrence capacity.

A variety of objections might be made to the recommended intensive investment in policing stage actions as a means for enhancing certainty (or the perception of sanction certainty) in the name of strengthening deterrence—not the least of which may focus on the resource (re-) allocation implications forthrightly pointed out by Durlauf and Nagin (2011). Without arguing the need for more effective policing strategies for crime reduction (a position easily supported), it is plausible that the practices associated with the court process may act as powerful obstacles—in contributing to delay (lack of timeliness) and uncertainty—to the delivery of deterrence. Moreover, these “antideterrent” properties of the court process also have important ramifications for the community’s perception of and/or regard for the justice apparatus. That community perception then may in turn have a negative influence on the values and understandings of the “would-be offenders” of general deterrence targeting, who, after all, are members of the community.

In giving short shrift to the possible effects of the court process, the conclusion that crime prevention and imprisonment reduction can be achieved mainly or most successfully by policing (risk of apprehension) is based on several unstated but to some extent questionable assumptions. First, the absence of full consideration of the effects of the court process on deterrence leaves an impression by default that the criminal process between policing and imprisonment stages forms a relatively direct path from apprehension to sanction. By implication, the court process plays a vacant role, either as facilitative or, at worst, a neutral or even an absent role in producing the deterrent result—driven more powerfully, according to the authors’ position, by apprehension risk. A second questionable

assumption implicit in this conceptualization is that the police-generated crime reduction result will be lasting and not ephemeral, thus contributing to a relatively sustained state of improved community safety. This flies in the face of findings showing more short-term effects of targeted policing strategies (see, e.g., Goldkamp and Vilcičá, 2008; Mazerole, Soole, and Ramboots, 2006; Weisburd and Eck, 2004; Weisburd et al., 2006). Third, the proposed emphasis on police-centered crime control raises questions about how policing would fit into the overall aims of the justice process and somehow avoid giving policing too powerful a role.

Whether deriving from critical gaps in the literature or from a police-imprisonment-centered conceptualization of deterrence theory principally featuring risk of apprehension for certainty and length of imprisonment for severity, the largely unaddressed role of the court process in deterrence theorizing allows such analyses to ignore what may be a major obstacle to the deterrent powers of the police or imprisonment, which include threats to certainty, timeliness, and even, severity.

Just as discussions of deterrence (and incapacitation) acknowledge the “criminogenic” effects of imprisonment, which would operate counter to deterrence assumptions, the criminal court role incorporates many of its own “side effects,” symptoms of justice system dysfunction, that almost certainly undermine the assumption that the impact of criminal court processing is captured adequately by estimating a probability of conviction/sentencing in cases that pass through it or by characterizations in the deterrence literature of the court process as involving the uncertainties of “successful prosecution” or “plea bargaining.” These “dysfunctional” features of the court process routinely act counter to certainty, timeliness, and even severity of sanction necessary for deterrence.

Two rarely studied features of criminal court processing illustrate deterrence-adverse effects of the criminal process: (a) the generation of fugitives in adjudication processing and (b) dismissals as the final disposition of criminal charges. (Several other examples, such as prosecutorial charging, court delay, jail overcrowding, etc., could serve the argument just as well.) These are viewed as symptoms of dysfunction because the state of clumsiness represented by various poorly functioning aspects of the criminal process—not necessarily desirably as intimated by Packer’s (1968) due process model—inhibit the accomplishment of justice aims, including but not limited to deterrence.

Fugitives, who are defendants scheduled but failing to attend court proceedings and remaining absent from the criminal process for more than a short period, have a far greater impact on the system’s deterrent capacity than just biasing estimation of conviction rates. They represent cases of defendants that are ultimately moved off the active court calendar and accumulated in an invisible, unreported court backlog. When occurring in significant numbers,² as they do in many of the larger jurisdictions, fugitives offer a

2. Even low rates of failure-to-appear or bench warrants may result in large numbers of defendants whose cases are not adjudicated over a period of time in larger jurisdictions.

counterweight to deterrent aims by providing negative examples to the would-be offender audience of deterrence theory because they flout judicial authority and law enforcement by ignoring court orders. Often, so-called fugitives do not “flee” but merely opt out of the justice process and return to their communities and former routines. Not only do fugitives serve as visible examples of the impotence of deterrence, revealing little fear of consequences, they exemplify a sort of “reverse-deterrence” by serving as “bad advertising” by their intentional and open resistance to authority, refusing to recognize the threat of sanction, forestalling any consequences from disposition of the criminal charges, and, overall, defeating the certainty and timeliness of the sanctioning process. Moreover, this defiance is not rare or only imagined. In large cities like Philadelphia, for example, fugitives contribute to a subcultural belief that risk of apprehension is low and, even if arrested, that often little consequence attaches to merely walking away from the court process. The price to be paid by an absconder-resister is uncertain and distant, if a price is to be paid at all.

Some, targeted enforcement initiatives, which are an example of the kind of policing activity promoted by Durlauf and Nagin (2011), involve high-volume arrest strategies designed to provide high-visibility illustrations of the certain consequences of illegal conduct. In various forms, such targeted policing strategies can, according to the literature, provide short-term crime reduction effects in the selected areas. Although the high-visibility strategy promotes the crime reduction goals alluded to by Durlauf and Nagin, such an enforcement approach has adverse side effects, one of which is that it actually increases the fugitive population, as a product of the high-volume arrest strategies. Unusually large numbers of arrests temporarily overwhelm the system with more defendants than the system is accustomed to handling, sweeping in arrests that are lower quality, resulting in larger numbers of fugitives as detention and supervision resources fail to keep up with the products of police initiatives (Goldkamp and Vilciã, 2008).

A related example of system dysfunction associated with the black-box court role is dismissals of criminal charges, meaning dismissal of all charges in a criminal case. Surprisingly, dismissal is either the largest or the second largest category of adjudication disposition in many American jurisdictions (Vilciã, 2010). In fact, the finding that a large portion of criminal cases results in complete dismissals has been documented since the 1920s across jurisdictions (Vilciã, 2010). Dismissals might occur for several reasons, including weak cases, police overcharging, prosecutorial overcharging or lack of preparation, and so on. Here, though, the point is that, whatever the cause, dismissals as a case outcome are common in court processing and clearly do not contribute to certainty of sanction. Worse, at least one large study has shown that this common attribute of the black-box court role has public safety implications: Net of controls, dismissal adds to the probability of reoffending (Vilciã, 2010) among criminal defendants. Thus, dismissals not only reflect uncertainty in court outcome but also are “criminogenic” in that they may add to the probability of reoffending—an effect opposite to that expected from sanctioning in deterrence.

Other symptoms of system dysfunction disruptive to the assumptions of deterrence are associated with the court role that intervenes between the apprehension and the imprisonment stage of threat of sanction or sanction delivery. A closer look at bail and bondsmen, overcharging, prosecutorial preparation, plea negotiation, and emergency procedures from jail crowding—all products of court process—could reveal effects contrary to the assumed negative relationship between sanction and crime. The two examples of court process “dysfunction,” fugitives and dismissals, however serve to underscore the difficulty of merely assuming that the court role is either neutral or facilitative to producing deterrence. The fugitive phenomenon suggests a lack of appreciation among “offenders” of the intended role of criminal sanction or even of consequences at all. The dismissal phenomenon can be understood as suggesting that a very large portion of criminal court actions simply misfire and failure to achieve anything near ultimate sanctioning, earning instead a sort of “antideterrent” reward, which clearly undermines certainty in sanctioning of the deterrence formula. Little deterrent impact likely to result from fugitives and even worse, however, an opposite effect could be hypothesized.

Unless one is conceiving of the policing function in isolation, these outcomes in the cases of criminally processed defendants raise the possibility that aspects of the court role may not only inhibit certainty and timeliness in general, but, more specifically, may also undermine or counteract hopeful prospects for improving apprehension risk ascribed by Durlauf and Nagin (2011) to policing functions. From a deterrence perspective, one could argue that, indeed, policing interventions can be understood in and unto themselves as serving crime-reduction goals without ulterior aspirations for successful prosecution of criminal charges. Even acknowledging this police function, the dispersal of once-apprehended offenders back into the community as fugitives and the dismissal of a large proportion of all criminal matters without sanction send an independent message to would-be offenders and community residents generally that highly visible police activities do not necessarily result in consequences for offenders. In addition, both “dysfunctions” teach victims, witnesses, and community members the “antideterrent” lesson that the wronged are not protected by criminal justice actions and that criminal cases often will not even reach a conclusion.

These two examples of dysfunction share another side effect that undermines the propositions of deterrence, crime reduction and imprisonment reduction proposed by Durlauf and Nagin (2011). Both affect the community in ways deleterious to deterrent impact. They teach an opposite lesson than the one intended, (i.e., that threat of consequence for wrongdoing is not followed by consequence), they promote lack of credibility among the population concerning justice system capabilities, and they even contribute added threat to public safety. All of these serve to erode the community’s respect for justice agencies, officials, and functions—making the delivery of deterrence an even more challenging prospect.

In short, fugitive defendants may have little fear of receiving any official consequences. Dismissals may also convince offenders that the formal machinery of sanction delivery often fails to deliver promised consequences. The audience for both forms

of “bad advertising” is large: fugitives and dismissals both leave behind an extended audience of observer residents, victims, and witnesses who absorb the lesson that justice will not be delivered. Along with the belief that negative sanctions will not face offenders in a timely fashion or with certainty, such firsthand observers of system dysfunction are simultaneously disabused of the belief in a certainty that justice will be done.

If the effects of court process can—at least in its dysfunctional aspects—weaken, neutralize, or reverse the reported powerful role of policing actions in deterrence, they also raise serious doubt about the feasibility of increasing certainty in sanctioning while lessening severity, by focusing increased resources on policing particularly, all in an attempt to enhance crime reduction and in turn to promote confinement reduction capabilities. A somewhat initiative-weary observer might worry most that the main effect of the Durlauf and Nagin (2011) proposal will yet again result in more resources being devoted to policing at the cost of neglecting other promising strategies—or even addressing court system dysfunction to address the antideterrent effects of the court process.

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John S. Goldkamp is a Professor in the Department of Criminal Justice at Temple University, Philadelphia. His research has focused on judicial discretion, innovation and dysfunction as well as on discretionary liberty decisions, such as pretrial release and detention and the use of local confinement. Recently he was appointed by Governor Edward Rendell to review the correctional and parole process in Pennsylvania after killings of police officers by parolees and persons under correctional supervision in the community raised questions about violence among parolees.

Extraordinary sentences and the proposed police surge

Marie Gottschalk

University of Pennsylvania

Durlauf and Nagin (2011, this issue) argue that if we want both to reduce crime and to reduce imprisonment in the United States, then we need to redesign our sentencing policies and policing practices based on a keener understanding of deterrence. Channeling the 18th-century Italian philosopher Cesare Beccaria, they contend that the certainty of punishment is a far greater deterrent to crime than the severity of punishment. Their argument centers on the specific roles that sentence lengths and the police play in deterring criminal activities. They marshal considerable evidence demonstrating that increasing the severity of punishments by extending sentence lengths does little to deter crime, but more and smarter policing does. Providing the police with greater resources and changing how they operate increase the likelihood that an offender will be apprehended and punished. Doing so would alter potential offenders' calculations of risk, making them less likely to commit a crime. Durlauf and Nagin's first main policy prescription—repealing or greatly restricting lengthy mandatory minimum sentences—is sensible but too timid given the evidence they present. Their other main recommendation—reallocating more resources to the police to reduce crime and to reduce the imprisonment rate—is more problematic.

Sentence Lengths

Based on their review of the research, Durlauf and Nagin (2011) contend that imprisonment and lengthy sentences do not necessarily deter offenders and would-be offenders from committing a crime. The most persuasive studies amid this admittedly small body of literature “suggest that increases in the severity of punishment have at best only a modest deterrent effect” (p. 31). All things being equal, the recidivism rate for people sentenced to prison, regardless of sentence length, is higher than for those who receive alternative

Direct correspondence to Marie Gottschalk, Department of Political Science, University of Pennsylvania, 208 S. 37th St., Philadelphia, PA 19104-6215 (e-mail: mgottsch@sas.upenn.edu).

sanctions (Nagin, Cullen, and Jonson, 2009). It also seems that increasing sentence lengths considerably does not deter crime. For example, sentencing enhancements for offenders who use a gun when committing a crime apparently have not reduced the use of guns.¹

Durlauf and Nagin (2011) discuss several reasons why longer sentences do not necessarily deter criminal behavior and reduce crime. Although we still need to know much more about what determines criminal decision making, we do know that offenders tend to be present oriented. Thus, lengthening a sentence from, for example, 10 to 15 years for a certain crime is unlikely to have much of an effect on whether someone commits that crime or not. Mounting—but not airtight—evidence is growing that prisons are criminogenic for many offenders for a variety of reasons, so sending certain people to prison actually might increase the crime rate. Finally, compelling evidence indicates that people age out of crime. Researchers persistently have found that age is one of the most important predictors of criminality. Criminal activity tends to peak in late adolescence or early adulthood and then declines as a person ages (Laub and Sampson, 2003). Older inmates who have served lengthy sentences are much less likely to return to prison because of the commission of a serious crime than younger inmates who have served shorter sentences.

Because long prison sentences have such a minimal impact on reducing the crime rate, Durlauf and Nagin (2011) recommend that highly punitive mandatory minimum sentences like California's infamous three-strikes law be repealed or restricted to serious offenses. Given all the evidence they present and the enormity of the crisis of mass incarceration in the United States, this policy recommendation is surprisingly timid. It begs the pressing question of what to do about all the people now serving extremely long—in some cases, endless—sentences.

Faced with severe budget shortfalls, many states have begun talking about how to reduce their prison populations. Their attention primarily has been focused on how to shorten the prison stays of nonviolent offenders and on how to keep them out of prison altogether. However, approximately half the inmates in state prisons are there because they have been convicted of violent offenses. If the evidence is so compelling that most offenders age out of crime and that long sentences do not deter much crime, then why not recommend that the parole and commutation processes be revitalized so that even people who have committed serious crimes get a chance to prove they are rehabilitated and should be released? Why not make a forceful call to abolish life in prison without the possibility of parole and to make all life sentences parole eligible? And why not recommend a renewed commitment to releasing elderly or gravely ill inmates through geriatric or compassionate release provisions?

These suggestions are not as radical as they first seem. Until the early 1970s, even in a hard-line, retributive state like Louisiana, a life sentence typically meant 10.5 years. For

1. Durlauf and Nagin (2011) do mention one important caveat here. Although gun use laws have increased the length of sentences on the books, they seem not to have increased the actual lengths of the sentences meted out.

almost 50 years, the 10/6 law, enacted in 1926, governed life sentences in Louisiana. All lifers, regardless of their crime, were routinely released in Louisiana after serving approximately 10 years if they had good conduct records and the warden's support. The years inmates spent in Louisiana's infamous Angola prison were often brutal and dehumanizing, but they nearly always had an end date. Almost overnight that changed. In 1973, lawmakers raised the minimum to be considered for clemency to 20 years. Three years later, they raised it to 40 years, and in 1979, they mandated that all life sentences meant life without the possibility of parole (Nelson, 2009: 17). In 1970, only 143 people were serving life without parole sentences in Louisiana. By 2009, it had mushroomed to 4,270 (Corley, 2009: 29), or approximately 11% of the state's entire prison population.

Life sentences have become so commonplace that approximately 1 out of 11 people imprisoned in the United States is serving one (Nellis and King, 2009: 3). The total life-sentenced population in the United States is approximately 141,000 people or roughly twice the size of the entire incarcerated population in Japan. Nearly one third of these life-sentenced offenders have been sentenced to life in prison without the possibility of parole (Nellis and King, 2009: 2). Approximately 1,755 people currently are serving life without parole sentences for offenses committed when they were juveniles, a sentencing practice virtually unheard of in the rest of the world (Nellis and King, 2009: 3). These figures on life sentences do not fully capture the extraordinary number of people who will spend all or much of their lives in prison. They do not include the huge number of prisoners serving so-called basketball sentences that exceed a natural life span.

The recidivism rate for lifers is much lower by far than for other offenders. A 2004 study by The Sentencing Project found that released lifers were less than one-third as likely to be rearrested within three years compared to all released prisoners (Mauer, King, and Young 2010: 24). Two-thirds of prisoners released in 1994 were rearrested within three years compared to only 1 in 5 lifers released that same year (Mauer, King, and Young 2004: 24). Only 7 of the 285 lifers in Pennsylvania who were released on parole between 1933 and 2005 after their sentences were commuted were recommitted to prison for a new crime. Of the nearly 100 commuted lifers who were ages 50 and older when they were released, only one was sent back to prison for a new crime (Advisory Committee on Geriatric and Seriously Ill Inmates, 2005: 77). These findings are consistent with other studies documenting the relatively low recidivism rate of people convicted of murder and of people on death row.² Bedau (1982: 173–74) found that less than 1% of released murderers were returned to prison for committing a subsequent homicide.

Keeping so many older prisoners incarcerated does not reduce crime and is extremely expensive. It vacuums up criminal justice dollars that might be spent more profitably on something else. The population of imprisoned elderly adults is growing rapidly. Between

2. For a summary of these research findings, see Marquart and Sorensen (1989: 9–10).

1999 and 2007, the number of people ages 55 or older in state and federal prisons grew by nearly 77%, and those ages 45–54 grew by almost 68% (Vera Institute, 2010: 4). Because of their greater need for expensive health-care services, prisons spend two to three times more to incarcerate an elderly inmate than a younger one or, on average, approximately \$70,000 a year (Anno et al., cited in Vera Institute, 2010: 5).

Many public officials have expressed interest in releasing infirm elderly inmates who do not pose a threat to society. One of the major obstacles is that older prisoners are more likely to have been incarcerated for a serious violent offense. A 2006 report on North Carolina prisoners found that almost 60% of inmates ages 50 and older were serving time for violent or sex crimes. More than half of them were serving a sentence of life or 10 years to life (Price, 2006). By late 2009, 15 states and the District of Columbia had established provisions for geriatric release (Vera Institute, 2010: 2). However, these jurisdictions rarely released elderly inmates because of political considerations, public opinion, the narrow criteria for eligibility, Byzantine procedures that discourage inmates from applying for release, and the complicated and lengthy referral and review process that often drags on until the time an inmate dies in prison (Vera Institute, 2010: 2). Some of these jurisdictions have yet to release a single elderly inmate using the geriatric early-release provisions.

Governors and other public officials today remain deeply opposed to releasing serious offenders, no matter how many decades they have served behind bars, no matter how sick they are, no matter the pile of evidence that they have turned their lives around, and no matter the mounting evidence about deterrence and aging out of crime. In 2008, Governor Arnold Schwarzenegger and prosecutors in California vehemently opposed the compassionate release of Susan Atkins, a former follower of Charles Manson who was convicted in the infamous 1969 Tate-LaBianca murders. Atkins, who was paralyzed and dying of brain cancer, had become a model prisoner in her 40 years behind bars. In opposing her release, Schwarzenegger said, “I don’t believe in [compassionate release]. I think they have to stay in, they have to serve their time.” He went on to say, “[T]hose kinds of crimes are just so unbelievable that I’m not for compassionate release” (CNN, 2008).

By contrast, pardons and commutations were a vital feature of the U.S. criminal justice system throughout the 19th century and much of the 20th century (Whitman, 2003). Presidents and governors regularly invoked their powers of executive clemency to reduce prison sentences, remit fines, and spare the lives of prisoners on death row. Despite the widespread view that pardons and commutations were antidemocratic and a source of corruption, executive clemency was a key valve to manage the prison population, correct miscarriages of justice, and restore the rights of former offenders (Jensen, 1922; Whitman, 2003). Presidents Woodrow Wilson, Franklin D. Roosevelt, and Harry Truman issued hundreds, and in some cases thousands, of pardons. Woodrow Wilson, an ardent supporter of temperance but an opponent of the Volstead Act that imposed Prohibition, nonetheless pardoned hundreds of alcohol-related offenders (Ruckman, 2001: 8). The number of presidential pardons began to ebb during the Eisenhower years and severely dropped off

with President George H.W. Bush and his successors (Ruckman, 1997: 261, Table 1). As one commentator quipped, since becoming president, “Barack Obama has issued more pardons to Thanksgiving turkeys than to ex-offenders” (Grits for Breakfast, 2010).

For much of U.S. history, presidents and governors continued to wield their powers of executive clemency even in the face of public uproars over particular pardons. On Christmas Day in 1912, Governor George Donaghey of Arkansas, a fierce opponent of convict leasing, “pardoned 360 state prisoners in one fell swoop” in a gesture that made national headlines (Oshinsky, 1996: 67–69). For years, a coalition of cotton planters, coal operators, corrupt judges, and anxious taxpayers had stymied his attempts to end the brutal system of convict leasing, which Donaghey considered a legalized system of murder in which the punishment so poorly fit the crime. In the 1930s at the height of Jim Crow era, Governor Mike Conner traveled to the infamous Parchman Farm to investigate the “forgotten men” of Mississippi’s legendary penal farm. He “offered a personal hearing to any convict who had severed a sentence of at least ten years.” At his “mercy courts,” Conner freed dozens of Black prisoners in the face of charges that he was granting “amnesty for ancient coons.” The governor was particularly affected by the sight of Black children wearing prison stripes at Parchman, where one out of five inmates was younger than 20 years of age. He sent many of these children home after giving them a lecture about honesty (Oshinsky, 1996: 196–200).

Compare that with the modern-day commutation record of Pennsylvania, which is one of six states where life means life. Between 1967 and 1994, Pennsylvania’s governors and pardon board commuted the life sentences of nearly 400 inmates. Since then, only three commutations have been granted. Democrat Ed Rendell has commuted only two life sentences since taking office in 2003. By contrast, Democrat Milton Shapp commuted 251 during his two terms in office (1971–1979), and Republican Raymond Shafer (1967–1971) commuted 95 during his single term (Advisory Committee on Geriatric and Seriously Ill Inmates, 2005: 78). Pennsylvania leads the nation—and indeed the world—in the number of juvenile lifers. Approximately 345 juvenile lifers are imprisoned in Pennsylvania, or one fifth of the country’s total. As in the case of juvenile lifers nationwide, approximately 25% of Pennsylvania’s juvenile offenders were not the primary assailant and, in many instances, were only minimally involved in the crime that sent them away for life. The state has been persistently unwilling to commute the sentences of juvenile lifers who have served decades behind bars, even in instances in which members of the homicide victim’s family have called for mercy and release (Liptak, 2005). A newly formed statewide coalition currently is engaged in an uphill battle to get legislators to consider a proposal that would make juvenile offenders eligible for a parole hearing after serving 15 years of a life sentence.

If the evidence that people age out of crime and that long sentences do not deter is so compelling, then what justification is there for refusing to consider releasing people who have been in prison for decades and those who are serving life sentences? Many of these prisoners committed violent offenses but are not necessarily violent offenders years later. However, the

widespread perception is that they still are violent despite stellar prison conduct records, ample evidence of rehabilitation through education, volunteering and other programs, as well as the mounting research about deterrence and aging out of crime. Mauer's claim 10 years ago that "[p]ublic policy has all but obliterated the distinction between a violent *offender* and a violent *offense*, with Charles Manson emblematic of the former and a battered wife who attacks her abuser the latter" remains true today (2001: 17). Witness the uproar in North Carolina after the North Carolina Supreme Court declined in October 2009 to review a 2008 decision by the appellate court that a life sentence is to be considered 80 years under the state's statutes. After the ruling, the state's Department of Corrections announced its intention to release dozens of lifers who were eligible for early release thanks to the good time and merit time credits they had accumulated (Reutter, 2010). Governor Beverly Perdue stepped in to stop the release amid reports that many "rapists and murderers" were about to go free (Associated Press, 2009). This brouhaha spurred a spate of news stories about outraged victims and their families, which recounted gruesome details of crimes committed decades earlier (WSCOTV, 2009). In August 2010, the North Carolina Supreme Court reversed course, ruling that the state did not have to release dozens of inmates sentenced to life in the 1970s (Locke, 2010).

With the ascendancy of law-and-order politics the past couple of decades, executive clemency has atrophied across the country. The American Bar Association's Justice Kennedy Commission (2004: 67) "reviewed the state of pardoning in the United States and found that in most jurisdictions the pardon power is rarely utilized to reduce sentences or promote reentry of individuals to the community." The Kennedy Commission wisely recommended that states and the federal government revitalize the clemency process. It urged them "to establish standards and provide an accessible process by which prisoners may request a reduction of sentence in exceptional circumstances," including but not limited to "old age, disability, changes in the law, exigent family circumstances, heroic acts, or extraordinary suffering" (2004: 64). The commission also called for ensuring that procedures are in place to aid prisoners who cannot advocate for themselves to seek clemency.

Standardizing procedures for seeking clemency and providing prisoners more assistance to navigate the clemency process will not revitalize the clemency process on their own. Public officials once again need to be willing to assume the political risks that come with releasing offenders early. In the past, governors and presidents were willing to weather charges of being antidemocratic or corrupt when they invoked their clemency powers. Now that crime has become such a persistent political tripwire in the United States, they need to steel themselves—and prepare the public—for the rare but inevitable instance when a released prisoner goes on to commit a front-page crime.

Although the recidivism rate for older inmates who have served lengthy sentences is comparatively lower, it is not—and will never be—zero. Despite all the attention these days on developing better risk-assessment tools, we will never be able to predict with complete certainty who will commit a serious crime if released and who will not. Serious offenders are not likely to kill or assault in prison or after release. However, some will. Of the 558

inmates (excluding those in Illinois) on death row awaiting execution whose sentences were commuted as a result of the 1972 *Furman* decision, six went on to commit murder in prison over the next 15 years (Marquart and Sorensen, 1989: 21). The 239 *Furman*-era capital offenders who were released on parole to the community, who as a group were more than 40 years old when they got out, committed 12 violent offenses. Notably, one killed again and two raped again (Marquart and Sorensen, 1989: 23). Those who went on to commit additional violent acts apparently were indistinguishable from those who did not in terms of their previous offense characteristics, race, age, and criminal history (Marquart and Sorensen, 1989: 22, 28). A more recent survey of the 322 former death row inmates released on parole from the “class of ‘72” found that five went on to kill again. They had served an average time of approximately 18 years. Of the 164 who were not released, 9 committed homicides while in prison (Cheever, 2006: 206).

If public officials are going to revitalize executive clemency and parole, then they need to reconcile themselves to “the fact that release procedures, like all other human practices, are not infallible” (Bedau 1982: 175–180). They need to improve their rehabilitation programs and risk-assessment tools, but they also must do more to educate the public that inmates who have served lengthy terms are unlikely to commit violent offenses—but they are not risk free.

Governors willing to assume that risk remain the exception today. Governor Janet Granholm of Michigan is on pace to commute more sentences than her three predecessors combined. Nearly all of these commutations came after she ran for reelection in 2006 (Bell, 2010). The commutation and pardon record of Mike Huckabee came under national scrutiny and spurred a spate of political obituaries for the former governor of Arkansas after a man he granted clemency to years ago later killed four police officers in Tacoma, Washington, in 2009.

Released long-time offenders do not pose a widespread public threat, but they do pose a significant risk to political careers. Changes in the institutional structure of parole and pardon boards could provide public officials with some important political insulation from potentially controversial release decisions. States need to stop the widespread practice of staffing these boards with political appointees who are so vulnerable to the wrath of public opinion. These boards should comprise psychologists, social workers, corrections officials, and other professionals with specialized training and expertise to evaluate offenders’ suitability for release. Forty years ago, the President’s Commission on Law Enforcement and the Administration of Justice made a similar recommendation, which remains largely unrealized today. In nearly every state, governors appoint all members of the parole board (Petersilia, 2009: 191). Two thirds of the states have no professional qualifications for parole board membership. A notable exception is Ohio, where all parole board members “are appointed by the director of the state department of corrections, serve in civil service positions, and must have an extensive background in criminal justice” (Petersilia, 2009: 191).

As Senator James Webb (D-Va.) said at a recent conference on reentry sponsored by the Hamilton Project, “The real question is about fear. And I think it invades the political process” (Hamilton Project, 2008). Politicians and public officials can help neutralize that fear by educating the public about the nuances of deterrence, the limited utility of lengthy sentences for fighting crime, the phenomenon of aging out of crime, and the strengths and limits of risk-assessment tools. However, they cannot guarantee that releasing offenders will be risk free. As Glenn Martin of the Fortune Society said at the Hamilton Project conference, “[W]e need to increase our appetite for risk . . . we have to at least accept the fact that some people are going to fail and some people are going to fail pretty significantly” (Hamilton Project, 2008).

The Police Surge

Durlauf and Nagin’s (2011) other main policy recommendation is to reallocate more resources to the police and change how those resources are deployed. In short, they recommend a police surge. Presumably, if sentence lengths were reduced and more offenders received alternative sanctions, then the prison population would drop, freeing up resources now going to sustain the world’s largest penal system. Durlauf and Nagin propose shifting these resources to the police because “larger resource commitments to policing are associated with lower crime rates” (p. 26). In their view, the police are the frontline in making “the risks of crime clearer and the consequences of crime faster and more certain” (p. 14). If would-be offenders perceived that their chances of being apprehended by the police were increasing, then this fact would deter them from committing a crime. According to Durlauf and Nagin, putting more police on the beat, concentrating officers on “hot spots” responsible for a disproportionate amount of crime, and focusing on problem-solving policing that targets a specific issue, such as open-air drug markets or teenagers victimized on their way to and from school, increases their perception of risk.

Durlauf and Nagin narrowly construe their policy proposals to solve the crime and punishment dilemma. They are preoccupied with finding solutions premised on recalibrating the criminal justice system. They seem to eschew the emerging movement to reconceptualize the crime and punishment problem as part of a larger social-welfare or public health issue. Durlauf and Nagin acknowledge the mounting evidence that investing in certain childhood development programs reduces criminality. Nonetheless, they explicitly choose to ignore social-welfare alternatives to reduce crime and reduce imprisonment and focus instead on making the case for reallocating more resources to the police.

Their two main justifications for doing so are not convincing. First, they claim that non-sanction-related alternatives to reduce crime and reduce the incarceration rate already have received considerable attention elsewhere. However, even a cursory look at the main criminology journals and the public debate over crime and punishment reveals that the lion’s share of research and public attention has been on criminal justice solutions—not on social-welfare or public-health approaches. Moreover, Durlauf and Nagin (2011) claim that any

call to shift resources from the criminal justice system to the social-welfare system to fund, for example, education or early childhood development programs, “would pose far more daunting institutional and political challenges to justify to policy makers.” Here, Durlauf and Nagin underestimate the daunting political challenges to forging a new direction in criminal justice policy premised primarily on channeling even more resources to the police.

During the past few decades, the resources available to many police departments and law enforcement agencies have increased dramatically. Between 1980 and 2006, spending per capita on police quadrupled (Bureau of Justice Statistics, 2003: 11, Table 1.7; 2006, Table 1.8). This has occurred largely without a commiserate increase in the accountability of the police to the communities they are supposed to serve. Police and their political benefactors have stridently resisted creating independent civilian review boards with real teeth to monitor and discipline their activities. Many prosecutors have been loath to pursue charges aggressively of police brutality and other criminal activities by the police. Thanks to the C.O.P.S. program inaugurated by President Bill Clinton, the Byrne Justice Assistance Grants established under the Anti-Drug Abuse Act of 1988, lucrative and highly permissive forfeiture laws, and other provisions, police departments have acquired a variety of paramilitary equipment and have expanded their paramilitary operations, their antidrug task forces, and other controversial operations (Alexander, 2010: 77–83; Kraska, 2001). The police also have been the front-line foot soldiers in the War on Drugs and in carrying out massive stop-and-frisk campaigns in certain communities. Furthermore, they are becoming important players in the local enforcement of federal immigration policies.

As a consequence, the police are widely viewed in many inner-city neighborhoods and elsewhere in the country as an occupying army unaccountable to the local citizens. Blacks in particular widely mistrust the criminal justice system, especially the police, and see it as biased against them (Bobo and Thompson, 2006: 456–458). The *Wire*-esque behavior of the police and prosecutors in many cities coupled with the hyper-incarceration of African Americans has “created a deep crisis of legitimacy for the legal system in the eyes of black Americans and a real threat to the promise of equality before the law,” Bobo and Thompson (2006: 446) concluded in their analysis of the enormous Black–White differences of opinion on criminal justice issues. Durlauf and Nagin (2011) concede that heightened police presence may aggravate longstanding community grievances, but their policy proposals do not directly address how to make the police more accountable.

Durlauf and Nagin (2011) note that certain types of policing, notably rapid response to calls for service, apparently do little to deter crime and should be deemphasized. However, the fact is that a substantially lower proportion of Blacks than Whites expect the police to respond quickly when they report a crime and to take the report seriously (Bobo and Thompson, 2006). This has enormous political and policy consequences. It is hard to see how a call for a police surge without simultaneously calling to make the police more responsive to requests for help from the local community will reduce crime and reduce incarceration in the long run. Such an approach is unlikely to win over the hearts and minds

of the citizens of the most crime-ridden and most heavily policed (and yet underpoliced) communities in the United States. These also tend to be the most socially, economically, and politically disadvantaged communities. As Bobo and Thompson (2006: 467) noted in their discussion of the work of the social psychologist Tom Tyler, “legitimacy matters, both for the practical goal of the effective functioning of law enforcement and for the profoundly moral goal of ensuring a government that treats all of its citizens with an equal measure of respect.” Proposing to throw more resources at the police while only tinkering with rather than radically reforming their role in the community will not address the deep-seated legitimacy crisis in many urban neighborhoods that is an impediment to deterring crime. This approach also is likely to reinforce the social and political exclusion of these neighborhoods.

Some sound reasons exist to advocate expanding the number of police officers in high-crime areas. Historical and cross-national evidence seems to buttress claims that more police means less crime and that the United States is underpoliced. Jurisdictions with the most police officers today tend to have the lowest imprisonment rates and the smallest rates of increase in imprisonment (Stuntz, 2008: 1993). This relationship has held, more or less, since the Gilded Age. In his analysis of cross-regional variations in police per capita, murder rates, and imprisonment, Stuntz found that the South, where police and other government services were historically underfunded, has had a much lower number of police per capita and generally has had much higher imprisonment levels and murder rates.

The resources available to the police and other law enforcement agencies have increased markedly in the United States the past few decades, but the number of police officers per capita has increased only modestly, from 204 per 100,000 in 1970 (Stuntz, 2008: fn. 209) to 240 per 100,000 in 2009 (Federal Bureau of Investigation, 2009: Table 74). Behind these national averages are enormous variations between jurisdictions in police per capita. For example, New York (417) and Philadelphia (434) have nearly 75% more police per capita today than Houston (236) and Los Angeles (259) (calculated from Federal Bureau of Information, 2009: Table 78). New York City’s crime rate has fallen dramatically even though its police force is down approximately 6,000 officers from its peak 10 years ago. Philadelphia’s crime rate is down from what it was 10 years ago, but it is still much higher than New York City’s, despite their comparable number of police per capita. Although the size of the public police force has not grown enormously, the number of private security personnel has increased exponentially in the United States (Garland, 2001: 17–18, 160–163), which complicates claims that the United States is underpoliced.

Cross-national data on police per capita does have its problems. Nonetheless, it seems that the United States is relatively underpoliced. President Clinton promised to put an additional 100,000 police officers on the streets through his C.O.P.S. program. This would have brought the number of police per capita in the United States up to 310 per 100,000 (Stuntz, 2008: 2034), which is slightly below the European Union (EU) rate of 337 per 100,000 (Barclay and Tavares, 2001: Table 3). However, C.O.P.S. ended up only adding

approximately 18,000 officers, and the federal government picked up their tab for only a few years (Stuntz, 2008: fn. 296).

Any police surge has to be accompanied by a quid pro quo to increase the accountability of the police and prosecutors to the local community and to expand the social-welfare and education programs that have been proven to prevent and reduce crime. EU countries have many more police, but they also have far more expansive social-welfare programs that reduce crime by ameliorating poverty and inequality and by providing high-quality day care, good schools, universal health care, and other critical social and economic programs (Currie, 2008: 80–85). Specific law enforcement reforms should include establishing civilian review boards with real oversight powers, ending prosecutors' hands-off approach to police misconduct, and addressing the widespread perception in inner-city neighborhoods that police do not respond to their complaints of crime quickly and do not take them seriously. In addition, more criminal cases need to be tried before juries drawn from the neighborhoods where the crime took place. Because most metropolitan counties encompass vast suburbs, "high-crime city neighborhoods have little control over the juries that try crimes committed on their streets" (Stuntz, 2008: 1995).

Finally, if certainty of punishment deters more than severity of punishment, then we cannot focus only on the role of the police. As Durlauf and Nagin (2011) note, successful programs like Hawaii's Project HOPE depend on the tightly coordinated efforts of the police, judges, and probation and parole officers. When it comes to meting out punishment, prosecutors are arguably the preeminent players in the criminal justice system and have legitimacy problems comparable with those that vex the police (Davis, 2007; Forst and Bushway, 2010; Sabol, 2010). "In a lot of communities, the D.A. is seen as the enemy," Seth Williams, Philadelphia's new district attorney, conceded recently as he announced the opening of the first of six planned community action centers intended to break down the barriers between law enforcement and the public (KYW Newsradio, 2010). District attorneys like Williams and state attorneys general have enormous authority to set "the tone and culture of the office" and to determine the direction in which prosecutors working under them exercise their discretion in individual cases (Davis, 2007: 97). They have wide discretion to determine the charges, structure the plea-bargaining process, decide whether to divert a case to alternative sanctions, and make sentence recommendations. It is a well-established fact that prosecutorial behavior can vary enormously from one jurisdiction to the next and from one seemingly similar case to the next. A recent report by the Justice Project made several laudable recommendations to improve prosecutorial accountability, including requiring prosecutors to enforce clearly defined policies and procedures spelled out in a written manual to reduce the arbitrariness and apparent biases of their decision making, to create open-file discovery in criminal cases, and to document all agreements with witnesses and jailhouse informants. The report also recommended that judges be required to report all cases of prosecutorial misconduct (however trivial), preferably to an

independent review board rather than to state bar associations, which have been notoriously ineffective in policing prosecutorial misconduct (Davis, 2007; Franks, 2010).

Durlauf and Nagin (2011) focus primarily on the front end of mass incarceration or on how to keep more men and women out of the system by decreasing sentence lengths and increasing the number of police. Those already in the system serving lengthy sentences are the forgotten men and women of their analysis. In promoting a police surge, Durlauf and Nagin are pushing policy solutions designed to be politically palatable to elite public officials and policy makers. The needs and views of the alienated citizens living in high-crime communities that have borne the brunt of the hyperincarceration of their family members, friends, and neighbors were largely forgotten.

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Marie Gottschalk is a professor in the Department of Political Science at the University of Pennsylvania. She specializes in American politics, with a focus on criminal justice, health policy, the U.S. political economy, organized labor, the welfare state, and the comparative politics of public policy. She received her Ph.D. in political science from Yale University.

POLICY ESSAY

IMPRISONMENT AND CRIME

Less imprisonment is no doubt a good thing More policing is not

Michael Tonry

University of Minnesota

Netherlands Institute for the Study of Crime and Law Enforcement

If policy makers were to take account of evidence, as Steven N. Durlauf and Daniel S. Nagin (2011, this issue) argue, then American crime-control policies would look very different. Here is how and why. Prison sentences have few general deterrent effects, if any. The effects of imprisonment on individual deterrence are most likely perverse; people sent to prison tend to come out worse and more likely to reoffend than if they had received a lesser punishment. Some things police do, however, can reduce crime rates. American jurisdictions should reduce their use of imprisonment and increase their investment in policing, thereby lowering crime, victimization, and imprisonment rates as well as saving money simultaneously. Everybody—offenders, prospective victims, and taxpayers—wins.

Yes, probably, concerning imprisonment and possibly concerning policing, but serious problems of unwanted unintended consequences would need to be overcome.

The conclusions and proposals are based in part on Nagin's recently completed comprehensive reviews of the literatures on general deterrence (Apel and Nagin, 2011) and on the effects of imprisonment on released inmates' subsequent offending (Nagin, Cullen, and Jonson, 2009). Durlauf and Nagin (2010) again surveyed the deterrence literature as well as the literatures on the effects of variations in police numbers, per capita spending, and crackdowns on crime. Durlauf and Nagin (2011) pull all that work together and add to it. The deterrence surveys conclude that credible evidence indicates that changes in sentencing laws sometimes produce deterrent effects but that the effects are highly contingent, depending on threat communication and patterns of implementation; are not easily replicable; and provide an insufficient basis on which to build sentencing policies. The prison effects survey concludes that no credible evidence suggests that imprisonment reduces reoffending by released offenders. To the contrary, tentative but not yet conclusive

Direct correspondence to Michael Tonry, University of Minnesota Law School, 312 Mondale Hall, 229-19th Avenue South, Minneapolis, MN 55455 (e-mail: tonry001@umn.edu).

evidence indicates that imprisonment is criminogenic and increases released inmates' rates of reoffending. The police effectiveness survey presents evidence that increases in police numbers and per capita spending reduce crime rates and that police crackdowns reduce crime rates net of displacement effects.

Drawing on classic works by Cesare Beccaria and Jeremy Bentham, Durlauf and Nagin propose a theoretical framework that links their conclusions. Beccaria famously distinguished among the severity, certainty, and celerity (speed) of sanctions and argued that severity was the least important. Certainty and celerity are what matters. Court and prosecution systems are notoriously uncertain and slow and always will be. Police, however, by means of their increased presence and changing tactics, can deter crime by increasing the certainty of observation and the speed of apprehension. If certainty and celerity are what matters, then investments in police are much likelier than investments in prisons to affect crime rates.

This commentary offers three sets of observations concerning Durlauf and Nagin's proposals. The first section discusses their policy implications, the second focuses on the solidity of the underlying research, and the third centers on the theoretical framework. In a nutshell, my conclusions are that the proposals to deemphasize use of imprisonment are sound for the reasons Durlauf and Nagin give as well as for humanitarian reasons but that the proposals to increase investment in policing carry with them heavy risks to civil liberties and racial justice. "Racial profiling" sums the dangers up—increased use of pretextual police stops, sanctioned by the courts, and grossly higher rates of stops of Blacks than of Whites (Alexander, 2010; Johnson, 2010). Overall, the proposals and logic are likelier to resonate in relation to policing than to imprisonment. Politicians probably care about police effectiveness; with punishment, effectiveness is seldom a matter of significant concern. Durlauf and Nagin's research summaries seem reasonable to me, although I believe the evidence in favor of general and marginal deterrence is weaker than they suggest and the evidence concerning police effectiveness is less convincing than they suggest. Their theoretical framework is plausible and useful.

Policy

The inelegantly named "research utilization" literature instructs that evidence sometimes on some subjects in some places influences policy choices.¹ For a positive example, findings from developmental research have formed the basis for greatly increased public investment in early childhood prevention programs. The critical question confronting Durlauf and Nagin's proposals is whether in the United States in the second decade of the 21st century, policy makers are likely to be influenced by research findings concerning the severity of

1. I do not discuss that literature in any detail here. I discuss it at some length in Tonry (2010a). David Green and I discussed it exhaustively in Tonry and Green (2003).

sanctions, adverse effects of imprisonment on offenders, and police effectiveness. My best guesses are no, no, and yes, respectively. Legislators like and trust police and prosecutors and seldom worry that they are unduly lenient or that they coddle criminals. Proposals to increase public investment in the police to enhance their crime-fighting effectiveness are likely to be well received. Sentencing and punishment policies have in the past 30 years been largely impermeable to influence by evidence. No significant signs indicate that things will be different any time soon.

Durlauf and Nagin acknowledge that the novelty of their overall policy proposals lie in the blending of the findings on which they are based and not in the findings themselves. Two of the main findings are not new. Many reviews of deterrence research during the past 35 years, several by Nagin (e.g., Apel and Nagin, 2011; Nagin, 1998), have reached similar or more skeptical conclusions. The criminogenic effects of imprisonment have been widely recognized in many countries for many years; only in the United States could policy makers with straight faces claim to be surprised by that finding. The findings on police effectiveness can be described plausibly as new, at least compared with 20 or 30 years ago.

Sentencing

The core difficulty for Durlauf and Nagin's proposals is that policy makers are moved by many considerations other than evidence of effectiveness and cost. Many sentencing and corrections policies that would be suspect if their proposals were taken seriously have been known to be ineffective for a long time. Practitioners, for example, have known for 200 years that mandatory penalties seldom operate as their proponents claim to expect and, partly as a result, that they are not effective deterrents. Successive cycles of empirical research in the United States in the 1950s, 1970s, 1980s, and 1990s confirmed what practitioners have long known.² Or, another example, no one claims that the federal 100-to-1 law for crack and powder cocaine sentencing (since August 2010, 18-to-1) deters sales of crack cocaine. It has been widely recognized for 20 years that it is unjust, a primary cause of racial disparities in federal prisons, and based on drastic distinctions between two substances that are pharmacologically indistinguishable. Former President Bill Clinton in 2008 referred to it as a "cancer," but when he was President, he signed legislation overruling a U.S. Sentencing Commission proposal to modify it (Wickham, 2008).

Clinton stalemated Republicans in the game of law-and-order politics by announcing he would never let them get to his right on crime issues. He stuck to it. As a result, federal law contains a three-strikes law and 50-plus more crimes punishable by death than before he became President. Crime has not been a major issue in an American presidential election since 1988 (remember Willie Horton?) and is seldom an issue in state or local elections.

However, the stalemate continues. Neither party, probably especially the Democrats, seems willing to break out of it for fear of being tarred as soft on crime. Despite 20 years

2. I recently surveyed the historical and modern literatures on mandatory penalties (Tonry, 2009).

of declining crime rates and increasing imprisonment rates, neither the federal government nor any state has enacted legislation substantially amending or repealing harsh sentencing laws or creating mechanisms substantially reducing prison populations. A few states have altered mandatory minimum sentence laws slightly, released a few thousand inmates under new release programs, or tweaked their sentencing guidelines, but those changes have only nibbled at the outermost edges of modern American prison populations and sentencing policies. Research can influence policy when “windows of opportunity” open through which evidence can pass. Concerning imprisonment and sentencing, the windows remain almost completely closed.

Criminogenic Prisons

That prisons make people worse has been a commonplace observation for 200 years. As long as prisons have been in existence people have known they are criminogenic. More than 200 years ago, the English prison reformer John Howard called prisons “schools for crime.” More than 40 years ago, the German parliament for that reason enacted the most effective sentencing law change in a Western country in the last 100 years (Weigend, 2001). The law created a strong legal presumption against the imposition of prison sentences of 6 months or less.³ Short prison sentences fell by 80%, from an average 120,000 such sentences per year in the 1960s to less than 20,000 per year thereafter, a level at which they continue to be imposed to this day.

The underlying logic was that 6 months is too short a time for a prison sentence to do an offender any good as, for example, through participation in treatment programs. Six months, however, is plenty of time to cause an offender to lose a job, a family, and a home, and to damage his or her children. In addition, the stigma associated with being an ex-prisoner is greater than that associated with a conviction and might diminish an offender’s prospects for the rest of his or her life. Those are among the reasons why most continental European countries worked hard to restrain the growth of their prison populations from the 1960s to the 1990s in the face of doubling and trebling crime rates. It is also a reason why successive Finnish governments worked for 30 years to drive the prison population down even though crime rates trebled between 1965 and 1990. They succeeded in lowering the imprisonment rate by 60%, from 165 per 100,000 in 1965 to 60 in 1990 (Lappi-Seppälä, 2001).

The one major exception in continental Europe was England and Wales from 1993 to the present. New Labour patterned its approach to crime on Bill Clinton’s. In my view, Labour’s criminal justice policies were the most repressive of any Western country’s since World War II. The only competitor for that distinction, the United States, enacted harsher policies and retained capital punishment. Even right-wing Republican governments, however, did not enact antisocial behavior order laws, threaten parents of wayward children

3. German law then and now provides in most cases for remission of one third of a prison term. The law thus discouraged the imposition of nominal sentences of 9 months or fewer.

with criminal convictions, maintain DNA from innocent people in police databases, or carry out routine surveillance of people not suspected of being criminals (or terrorists). Nor did any attempt occur to eliminate the double jeopardy rule, restrict jury rights, or weaken rules of evidence to make convictions easier to obtain. Nor have conservative American governments made powerful rhetorical arguments impugning defense counsel who represent their clients' interests as best they can or systematically urged that the policy interests of victims and offenders are irreconcilably opposed (Tonry, 2010b). Even in the United States, such arguments and proposals are made by cranks and crackpots, not by government ministers speaking in their official capacities.

That period in English history seems to have ended with the 2010 election of a Conservative–Liberal Democrat coalition government. Kenneth Clarke, the new English Minister of Justice, in a July 1, 2010 speech at King's College London signaled a change of direction (Travis and Sparrow, 2010). Clarke attacked the “Victorian bang ‘em up” prison culture of the preceding 20 years. He warned that simply “banging up more and more people for longer” makes some criminals worse without protecting the public. “In our worst prisons,” he said, “it produces tougher criminals. Many a man has gone into prison without a drug problem and come out drug dependent. And petty prisoners can meet up with some new hardened criminal friends.”

Clarke previously was in charge of prisons as Home Secretary in 1992–1993, when the prison population in England and Wales stood at 44,628. He observed that the June 2010 population of 85,000 is “an astonishing number which I would have dismissed as an impossible and ridiculous prediction if it had been put to me in a forecast in 1992” (Travis and Sparrow, 2010). He said that “for as long as I can remember” the political debate on law and order has been reduced to a competition over whether a government has spent more public money and locked up more people for longer than its predecessor.

He also said that “the consequence is that more and more offenders have been warehoused in outdated facilities and we spend vast amounts of public money on prison. But no proper thought has been given to whether this is really the best and most effective way of protecting the public against crime” (Travis and Sparrow, 2010).

Finally, he noted that reoffending rates among prisoners given short sentences had reached 60% but observed that “this does not surprise me. It is virtually impossible to do anything productive with offenders on short sentences. And many of them end up losing their jobs, their homes and their families during their short time inside” (Travis and Sparrow, 2010).

Such a transformation is unlikely to occur any time soon in the United States, no matter what the research evidence shows.

Police

Proposals to spend money to improve police effectiveness are an entirely different matter. Under the current economic conditions, police might not win budget increases. They

might suffer cuts. In neither case will that be because legislators are hostile to the police.

It is not entirely obvious to me, however, that increased expenditure to enable more intensive policing would be a good thing. Zero-tolerance, public-order, and misdemeanor policing have notoriously in their wake increased the extent of racial profiling and have compromised traditional civil liberties restraints on police interactions with citizens. In principle, police should stop citizens only when individualized bases exist—that satisfy legal requirements of proof—to believe they have been involved in a crime. In practice, especially in minority areas of cities, those restraints are honored only in the breach.

No one doubts that racial profiling by the police takes place or that it results in many more arrests of Black people than would occur otherwise. The fundamental questions are whether police stop Blacks at higher rates than they do Whites (yes, they do) and whether police have valid bases for stopping Blacks much more often than Whites (no, they do not). Answers to the second question usually are sought in evidence about the outcomes of the stops. If Blacks are stopped at twice the rate of Whites but drugs, guns, and other contraband are found in the same or in a higher percentage of cases, then that result implicitly demonstrates that police had valid reasons to be suspicious of Blacks more often. However, the reverse is true. Research on profiling generally concludes that police stop Blacks disproportionately often on sidewalks and streets and generally do not achieve higher hit rates for Blacks than for Whites (e.g., Engel and Calnon, 2004).

An especially comprehensive analysis of police stop-and-frisk practices documenting these patterns was released early in 2009. The data, on police practices in New York City for 42 months ending in mid-2008, were compiled by the New York City Police Department under a federal district court order relating to a lawsuit on racial profiling. Also under court order, the data were turned over to the Center for Constitutional Rights, which released an early analysis. Nearly 1,600,000 police stops of citizens occurred in those 42 months. Ten percent of those stopped were non-Hispanic Whites, although they made up 44% of the population. Half of those stopped were non-Hispanic Blacks, although they made up only a quarter of the population. Hispanics constituted 28% of the population and 30% of those stopped.

Arrest rates were approximately the same for the three groups, but for every other measure, arrests of Blacks were more intrusive and less productive. Once stopped, Blacks were much more likely than Whites to be frisked (28% of Whites in 2006 and 41% in 2008, compared with 46% of Blacks in 2006 and 56% in 2008). Only in 1% of cases were weapons found but at higher rates among Whites than among Blacks and Hispanics. Overall and in each year separately, Whites were more likely than Blacks and Hispanics to be in possession of drugs or other contraband. Finally, police used force against the people they stopped in nearly a quarter of cases. During the 4 years, police used force against 15–18% of Whites stopped. Among Blacks and Hispanics stopped, 21–26% were victims of police force.

This massive data set strongly corroborates the findings of scholarly research. Blacks are stopped much more often than Whites, relative to the composition of New York City's population, and are much more likely when stopped to be frisked and to have force used against them. They are, however, less likely to be in possession of guns or other contraband and are no more likely to be arrested. This last point warrants elaboration lest an important reality be ignored. Because so many more Blacks than Whites are stopped, the same or a somewhat lower arrest rate produces much larger absolute numbers of Black than White people taken into police custody (Center for Constitutional Rights, 2009).

Stops of Blacks often result in more arrests, however, partly because Blacks are more likely to resent the stop and to resist or act disrespectfully, partly because Blacks are more likely to have outstanding arrest warrants or to be in violation of parole or probation conditions, and partly because some police are racially biased. Police profiling practices thus often lead to higher levels of Black arrests and, therefore, convictions and prisoners than would happen otherwise. These practices are particularly likely to worsen racial disparities for drug and firearms offenses, as those are the two kinds of illegal contraband police stops are most likely to yield.

I have similar concerns about police crackdowns. As a legal matter, police should make arrests only when they believe individualized bases exist to hold and prosecute each person arrested. In many crackdowns, most prominently concerning political demonstrations at controversial events, such as World Trade Organization or Group of 8 meetings or recent Republican National Conventions in New York City and St Paul, Minnesota, police have routinely apprehended, or restricted the movement of, large numbers of people as to whom individualized bases for the actions could not be shown. As a result, huge numbers of arrests resulted in almost-inevitable dismissals at probable cause hearings.

Drug market crackdowns raise similar issues but with a pernicious racial twist. Street-level drug markets often are located in minority neighborhoods of large cities. It is possible in police sweeps to arrest many people in the environs of large open-air drug markets. The most extensive and fine-grained studies of street-level drug markets and police arrest policies were carried out in Seattle. Overall, only 8.4% of Seattle's residents in 2000 were Black, but in a 28-month period during 1999–2001, 51.1% of those arrested for drug offenses were Black (Beckett, Nyrop, Pflingst, and Howell, 2005: 424). Most people who shared, sold, or transferred drugs were White, but nearly two thirds of those arrested for trafficking offenses were Black. Among outdoor drug transactions, a third involved crack, a third involved heroin, and a fourth involved powder cocaine. Among arrests for outdoor drug dealing, 79% were for crack, 17% involved heroin, and 3% involved powder cocaine (Beckett, Nyrop, and Pflingst, 2006: Figure 1).

Making large numbers of near-simultaneous arrests almost inevitably means that many will not satisfy individualized basis requirements of proof. Most of those arrested will be Black or Hispanic. It is, to me, not an obviously good idea to encourage police to increase their use of crackdowns.

Research

Others more qualified than I am no doubt will express their disagreements, if any, with Durlauf and Nagin concerning their analyses of the three literatures. I do no more than explain why I think their conclusions concerning deterrence are a mite strong and why I am more skeptical than they are about the research on police effectiveness. I have little to say about criminogenic prisons, so I will start with them.

Criminogenic Prisons

My observations about John Howard, Kenneth Clarke, and German sentencing reform probably say all that needs to be said. Especially in the United States (and the United Kingdom), it would be remarkable if prisons were not criminogenic. Most people sent to prison are socially and economically disadvantaged, most are or have been alcohol or drug dependent, and most lack strong private systems of familial or social support. Most after their release are stigmatized and often are explicitly handicapped by laws precluding many kinds of employment. Neither in the United States nor in the United Kingdom are strong systems of state support in place to provide adequate housing or income to ex-prisoners. In lawyer talk, a judge could take “judicial notice” (i.e., form a conclusion without needing to hear evidence) that already disadvantaged ex-prisoners facing additional handicaps and lacking systems of support are more likely than other people to engage in crime. Duh!

Deterrence

Durlauf and Nagin note that many economists claim to find general deterrent effects from penalty increases or from severe punishments but that other social scientists almost always reach the opposite conclusion. They mention a couple of economists’ studies they find particularly persuasive, but they conclude that the findings are not generalizable and, accordingly, that the best conclusion is that available evidence does not justify assumptions that severe punishments or punishment increases are effective general deterrents.

Fair enough, but I dissent. I agree with the policy inferences Durlauf and Nagin (2011) draw but believe they give the economists’ findings too much credit. To show why, I rehearse the findings of several other surveys of the deterrence literature that reach stronger negative conclusions about deterrence effects and then explain why the economists’ occasional contrary findings generally should be disregarded.⁴

Social Scientists. A continuous series of reviews of deterrence research by social scientists other than economists (and a few by economists) for more than 30 years has concluded that general deterrent effects of severe punishments or of increases in punishment cannot be shown, setting aside the fundamentally different situations of parking and traffic law

4. I recently surveyed the several deterrence literatures (Tonry, 2008) but in this essay rely on other peoples’ work.

enforcement, tax laws, and penalties for administrative offenses. Here is a sampling of the more recent and widely cited reviews.

Nagin (1998: 4) himself observed that he “was convinced that a number of studies have credibly demonstrated marginal deterrent effects” but concluded that it was “difficult to generalize from the findings of a specific study because knowledge about the factors that affect the efficacy of policy is so limited.” He highlighted the following major factors: the relation between short- and long-term effects, the relation between risk perceptions and sanctions policies, the methods of implementation, and the extent of implementation.

von Hirsch, Bottoms, Burney, and Wikstrom (1999: 52), in a report commissioned by the English Home Office, concluded that “there is as yet no firm evidence regarding the extent to which raising the severity of punishment would enhance deterrence of crime.”

Doob and Webster (2003: 146) noted some inconclusive or weak evidence of marginal deterrence but concluded that “there is no plausible body of evidence that supports policies based on this premise [that increased penalties reduce crime]. On the contrary, standard social scientific norms governing the acceptance of the null hypothesis justify the present (always rebuttable) conclusion that sentence severity does not affect levels of crime.”

All of these reviews discuss works of economists and noneconomists. A meta-analysis by Pratt, Cullen, Blevins, Daigle, and Madensen (2006), by contrast, citing no economists produced a main finding, one “noted by previous narrative reviews of the deterrence literature,” that “the effects of severity estimates and deterrence/sanctions composites, even when statistically significant, are too weak to be of substantive significance (consistently below—.1)” (Pratt et al., 2006: 379).

Durlauf and Nagin’s conclusions are not vastly different but nonetheless are more positive about deterrence effects than the earlier reviews. Mostly, it seems, this is because of a couple of recent articles they hold in high regard (e.g., Helland and Tabarrok, 2007).

Economists. Economists discussing deterrence research tend to write only about the work of other economists.⁵ Three major literature surveys by economists, summarizing work principally by economists, find that increases in punishment achieve general or marginal deterrent effects. Lewis (1986: 60) described “a substantial body of evidence which is largely consistent with the existence of a deterrent effect from longer sentences.” Levitt (2002: 445), relying principally on data from two of his own analyses, described them as evidence “for a deterrent effect of increases in expected punishment.”

Levitt and Miles (2007: 456) concluded that “the new empirical evidence [produced exclusively by economists] generally supports the deterrence model . . . Evidence of the

5. In a classic instance, Joanna Shepherd (2004: 10–11), author of several economic studies finding a deterrent effect of capital punishment, testified before the U.S. Congress that a “strong consensus [persisted] among economists that capital punishment deters crime” and that “the studies are unanimous,” without mentioning the equally strong consensus among noneconomists (with agreement of many economists: Donohue, 2006; Donohue and Wolfers, 2005) that capital punishment cannot be shown to deter homicide.

crime reducing effects of the scale of policing and incarceration is consistent across different methodological approaches.” Much of their discussion focuses on whether capital punishment, recent increases in the scale of imprisonment, and changes in the use of police manpower have reduced crime rates; the marginal deterrence hypothesis receives little attention except concerning a study by Kessler and Levitt (1999) of the effects of a change in California law.

There are two reasons why the economists’ conclusions are so strong. First, they ignore work by other social scientists and accordingly make no effort to explain why others’ conclusions are wrong. Second, notwithstanding the increased influence of behavioral economics, the economists who write on this subject mostly seem wedded to the price model.

Ronald Coase (1960: 7), one of the law-and-economics movement’s founders, observed long ago that many economists “rarely shrink from applying in every context the model of rational, self-interested, human behavior that they borrow from economics proper.” Elsewhere, concerning deterrent effects, he wrote that “punishment, for example, can be regarded as the price of crime. *An economist will not debate whether increased punishment will reduce crime*; he will merely try to answer the question, by how much?” (Coase, 1978: 210, emphasis added). This statement might explain why economists, especially politically conservative ones, tend to conclude that increased penalties in the nature of things must have marginal deterrent effects and that capital punishment must deter homicide better than other penalties do. Economists assume that penalties deter and begin with that prediction, which is why Doob and Webster (2003) proposed that future deterrence research start from the tougher null hypothesis that penalty severity or increased severity has no deterrent effects.

Here is an example. Shawn D. Bushway and Peter Reuter, celebrating the contributions of economists to studies of sentencing, discuss an “important” article by William Landes (1971). Landes, in modeling sentencing and bail decisions, assumed that prosecutors behave rationally in pursuit of the goal of maximizing aggregate punishment: “The prosecutor’s objective function is such that he attempts to maximize the expected number of convictions weighted by the expected sentence given at trial, subject to a budget constraint on his resources” (Bushway and Reuter, 2008: 408). Put more simply, Landes assumed that prosecutors seek to maximize sentencing severity. Anyone who works with courts or prosecutors knows that this is nonsense. Prosecutors generally do not seek the harshest possible sentence but seek one that they consider just or appropriate in the individual case. Numerous studies, and the conventional wisdom of courts, demonstrate that prosecutors are central figures in circumventing three-strikes laws, mandatory minimum sentence laws, and rigid sentencing guidelines in cases in which they believe the prescribed sentence would be unjustly severe (Tonry, 2009).

Two influential and widely cited articles by economists illustrate the difficulties. Kessler and Levitt (1999) sought to identify deterrent effects from passage in 1982 of a California

referendum that increased penalties for certain crimes.⁶ They examined crime data at 2-year intervals and thereby missed a downward trend that began in 1980 and continued after the passage of the referendum. This made the post-1982 decline likely to be an extension of a preexisting trend rather than as a deterrent effect (Webster, Doob, and Zimring, 2006). Findings like this recur throughout the noneconomic social science literature on the effects of sentencing law changes. The initial evaluations of California's 1976 Uniform Determinate Sentencing Law, using 1-year pre–post comparisons, concluded that it caused prison admission rates to increase and average sentence lengths to decrease. Subsequent analyses showed that both changes began several years before the passage of the 1976 law and that the best explanation of the postimplementation changes is that they extended preexisting trends (Blumstein, Cohen, Martin, and Tonry, 1983). Even an economist as celebrated as Steve Levitt missed this sentencing evaluation 101 point.

Drago, Galbiati, and Vertova (2009) analyzed the deterrent effects of a broad Italian prison amnesty program in 2006 that reduced the prison population by 40%. One amnesty condition was that people who reoffended would be sentenced for the new crime plus an additional amount equal to the period by which the amnesty reduced the previous sentence. Recidivism rates were compared with those of offenders released in an earlier year, and the analysis found a deterrence effect for 2006 releasees serving short sentences but not for those serving long sentences. Lots of data quality issues can be raised concerning Italy's chaotic systems of official statistics, but a bigger problem persists: People who work in or study the Italian court system find the findings unbelievable. Italian courts are famously slow and inefficient, cases often are not concluded for years (appealed cases are completely retried), convictions are not final until the final appeal dates have expired (sometime 3 to 5 years after a conviction), and Italian magistrates are famously independent. Even if it were realistic to impute knowledge of the amnesty penalty increment to people released from prison, it is completely unrealistic to assume that they believe it would be imposed (or that it would be imposed consistently).⁷

6. I do not discuss Helland and Tabarrok (2007), who found deterrent effects of California's three-strikes laws, other than to point out that, of 18 quantitative analyses of the deterrent effects of California's three-strikes laws, 15 (many by economists) find no deterrent effects. The three that find effects are all by economists. Just about every imaginable basis for comparison has been used (minors compared with adults; people meeting two-strikes criteria compared with those meeting three-strikes criteria; crime rates in counties in which the three-strikes law was aggressively enforced compared with counties in which it was barely enforced at all; crime trends in California compared with those in other populous states without three-strikes laws; crime trends in large California cities compared with those in large cities in states without three-strikes laws) (Tonry 2011: Table 6.3; Zimring, Hawkins, and Kamin, 2001).

7. Durlauf and Nagin (2011) do not rely on the Drago et al. (2009) study but do discuss it in Durlauf and Nagin (2010). There, they note that the failure to find a deterrent effect for prisoners serving longer sentences might reflect the criminogenic effects of imprisonment on people exposed to them for a long time. They do, however, despite massive data quality problems, seem to accept the finding of a deterrent effect on prisoners serving shorter terms.

Many people, not all of them economists, believe it is in the nature of things that penalties deter and that harsher penalties deter more effectively than less harsh ones. Such people—I do not count Durlauf and Nagin (2011) among them—will believe in general deterrence whatever the evidence shows. This belief, however, is better characterized as ideological rather than as evidence-based.

Police. Here I have less to say except to offer two cautionary notes. First, since 1991 in the United States, everything works. After California enacted its three-strikes law in 1994 and after New York City implemented zero-tolerance policing, crime rates and violent crime rates fell in both places. However, we also know that crime rates in both places began to fall before the policy changes were adopted and that they fell in every other populous state and every other large American city. Mayor Giuliani and Governor Wilson both benefited from the happy timing and could claim that their policies worked. Fifteen years later, the clear weight of opinion concerning those policies is that they do not deserve major credit for the crime rate declines in those places (see, e.g., Zimring, Hawkins, and Kamin, 2001 [California]; Harcourt and Ludwig, 2006 [New York]; Tonry, 2004 [both]).

Most research showing that increases in police numbers of expenditure have crime-reductive effects has been carried out and published during the 20 years of crime rate declines. It is striking, and should make us think a bit, that during the 25 years of crime rate increases, most research on police numbers and expenditure concluded that no crime-reductive effect could be shown. I sat in many meetings in the 1980s in which senior police officials cautioned that the police could not be expected to overcome the influence of deep social and economic forces that cause crime rates to rise and fall.

Second, I am skeptical about the generalizability of the findings of research on drug market and hot-spots crackdowns. Of course, it is a good thing that drug markets occasionally are shaken up and that for a time other related forms of crime (e.g., market-related robberies or muggings) occur less often, net of displacement effects (Sherman, 1990). From a crime-prevention perspective, the important questions, though, are whether drug use, sales, or prices fall other than in the short term; whether dealers are driven out of the market and not replaced; and whether the crackdown is a viable strategy for addressing other crimes. If crackdowns have no aggregate long-term effects, then they are little different from castles of sand built on ocean beaches; the waves will wash them away as if they never existed. From race relations and human rights perspectives, the important questions are whether crackdowns and other forms of more intensified policing can be carried out in ways that respect fundamental civil liberty concerns and do not place unfairly disparate burdens on minority citizens. The evidence to date provides few grounds for confidence concerning either form of injustice.

Theory

Durlauf, Nagin, Beccaria, and Bentham are surely right about severity, certainty, and celerity. Formal criminal sanctions are so uncertain and variable in their severity that no good reasons

can be found to believe that they do much, if anything, to influence crime rates and trends. Increased police presence and visibility can make some response to criminal and antisocial behavior more likely, so it is not implausible to hypothesize that shifting emphasis and money from prisons to police might have some crime-reductive effects. However, it is not unlikely that such a shift will generate levels of racial profiling, police misconduct, and injustice that will more than offset any crime-prevention gains.

Durlauf and Nagin's (2011) article is an ingenious effort to combine the findings of diverse research literatures to draw general strategic conclusions about criminal justice policy. If they were to write their article, or act as advisors to governments, in Finland, Germany, or most continental European countries, the effects could be salutary. By confirming that little can be gained and much harm caused by means of repressive sentencing policies and heavy use of imprisonment, they would confirm existing policy preferences for the limited use of imprisonment.

The United States is another matter. The inferences they draw about general deterrence and criminogenic prisons are solidly based in evidence but do not support the prevailing political conventional wisdom. The police findings do. My prediction is that policy makers will heed only those findings that they find congenial.

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Michael Tonry is professor of law and public policy, University of Minnesota, and senior fellow, Netherlands Institute for the Study of Crime and Law Enforcement.

Shifting crime and justice resources from prisons to police

Shifting police from people to places

David Weisburd

*Hebrew University
George Mason University*

After 30 years of an American fascination with using imprisonment to deal with the crime problem, it is indeed time for a reasoned reevaluation of criminal justice policies. Steven N. Durlauf and Daniel S. Nagin (2011, this issue) provide just such an effort in their article and lead us to an important policy conclusion. It is time to increase investment in crime and justice resources in policing and reduce investment in corrections. This conclusion is based on strong evidence of the effectiveness of policing practices during the last 20 years as well as on data suggesting that imprisonment in the long run is likely to have criminogenic rather than crime-control outcomes.

These conclusions are particularly important in light of an assumption from little more than 10 years ago that the police could do little to influence crime. David Bayley (1994: 3), who continues to be one of our most thoughtful and important police scholars, wrote: “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 . . . This is a myth.” And Bayley was not alone; it was widely assumed by scholars in criminology that the police were not effective in reducing crime. Michael R. Gottfredson and Travis Hirschi (1990: 270) wrote in their classic book *A General Theory of Crime*: “No evidence exists that augmentation of patrol forces or equipment, differential patrol strategies, or differential intensities of surveillance have an effect on crime rates.”

Of course, this leads us to ask, “what has changed?” Durlauf and Nagin (2011) suggest that many policing practices have emerged that provide promise. But the key to their

Direct correspondence to David Weisburd, Department of Criminology, Law and Society, George Mason University, 4400 University Drive MS 6D3, Fairfax, VA 22030 (e-mail: dweisbur@gmu.edu).

conclusions is a series of studies that focus police resources on high-crime locations in the city. They also note the promise of focusing on high-rate offenders, but a careful review of the literature in this case suggests that the evidence is much weaker. For example, the National Research Council Panel on Police Policies and Practices (2004: 235) concluded the following: “While there is only preliminary evidence suggesting the effectiveness of targeting specific types of offenders, a strong body of evidence suggests that taking a focused geographic approach to crime problems can increase the effectiveness of policing.”

My own reading of police research during the last 20 years leads me to agree with Durlauf and Nagin’s (2011) call for a shift from investment in corrections to policing. However, an additional caveat should be added to this idea: We need to shift the focus of policing from people to places. Police practices today continue to be focused primarily on individuals. They usually begin with “people” who call the police. They are focused on identifying offenders who commit crimes. They “end” with the arrests of those offenders and their processing through the criminal justice system. This is not to say that the police ignore the places and situations in which crimes occur or that the police are not also concerned about community caretaking or broader social problems (Kahan and Meares, 1998; Mastrofski, 1999). Those factors are, by necessity, a natural part of how the police understand and respond to crime, but the core approaches of policing assume that people, whether victims or offenders, are the key units of police work.

In an essay in the Police Foundation’s *Ideas in Policing Series*, I also suggested that an investment in policing could lead to reduced imprisonment and to increased crime control (Weisburd, 2008). However, I argued that the police must refocus their paradigm of crime control from one that is centered on offenders to one that is centered on places. Policing places puts an emphasis on reducing opportunities for crime at places, not on waiting for crimes to occur and then arresting offenders. In this sense, place-based policing offers an approach to crime prevention that can increase public safety while decreasing the human and financial costs of imprisonment for Americans. If place-based policing were to become the central focus of police, rather than the arrest and apprehension of offenders, then we likely would see at the same time a reduction of prison populations as well as an increase in the crime-prevention effectiveness of the police (Weisburd, 2008: 9).

In the remainder of this essay, I want to focus on why places should be central to the reallocation of resources from corrections to policing. I begin by briefly reviewing the literature that shows that crime is “tightly coupled” to place at a very microgeographic level. I then argue that this strong coupling suggests promise for reducing crime without increasing imprisonment if the police can put places rather than people at the center of the crime equation. Finally, I suggest that the focus of crime prevention at places needs to be broader than just a concern with increasing risk for offenders and that, at times, police might not be the best crime-prevention agents to carry out place-based prevention.

The Coupling of Crime to Place

When we think about crime, we usually think about criminals. The crime problem in this sense is about people and why they commit crime. What causes them to become involved in crime? What can society do to prevent ordinary people from becoming criminals? How must we deal with criminals on the streets, and what kinds of punishments should society bring to those who commit crimes? These are the questions that scholars and the police generally have asked about the crime problem. Recent research, however, has suggested that another approach to the crime problem might be particularly promising. In this approach, the questions we ask are about the characteristics of places rather than of people.

Beginning in the late 1980s, a series of studies suggested significant clustering of crime at microlevels of place, regardless of the specific unit of analysis defined (see Brantingham and Brantingham, 1999; Crow and Bull, 1975; Pierce, Spaar, and Briggs, 1986; Sherman, Gartin, and Buerger, 1989; Weisburd, Bushway, Lum, and Yang, 2004; Weisburd, Maher, and Sherman, 1992; Weisburd and Mazerolle, 2000; Weisburd, Morris, and Groff, 2009). Perhaps the most influential of these studies was Sherman et al.'s (1989) analysis of emergency calls to street addresses during a single year. Sherman et al. found that only 3.5% of the addresses in Minneapolis, Minnesota, produced 50% of all calls to the police. Weisburd et al. (2004), using 14 years of crime-incident data in Seattle, found that only 4.5% of the street segments produced 50% of incidents and that less than 1% of the hottest street segments produced more than 20% of crime. Clearly, crime is not distributed randomly across place, and such concentrations suggest that specific factors link or concentrate crime to place.

This finding in some sense is a surprise in the context of traditional criminology, which has assumed that crime is “weakly coupled” to place. The idea of weak and strong “coupling” has been used in many disciplines to identify the extent to which parts of systems are linked or dependent on one another (e.g., see Orton and Weick, 1990; Weick, 1976). In criminal justice, the terms *tight coupling* and *loose coupling* are used frequently in organizational studies of the criminal justice system (e.g., Hagan, Hewitt, and Alwin, 1979; Maguire and Katz, 2002; Manning, 1982; Thomas, 1984). What I mean here by *weak coupling* of crime to places is that criminologists traditionally have not perceived the bonds that tie crime to place as strong, even though it has been clear from the outset that crime occurs in specific settings.

Sutherland (1947), for example, recognized the importance of place in the crime equation, even as he presented his theory of differential association among individuals. He noted in his classic introductory criminology text that “a thief may steal from a fruit stand when the owner is not in sight but refrain when the owner is in sight; a bank burglar may attack a bank which is poorly protected but refrain from attacking a bank protected by watchmen and burglar alarms” (1947: 5). Nonetheless, like other early criminologists (e.g., Hirschi, 1969; Merton, 1938; Sykes and Matza, 1957), Sutherland did not see such places as a relevant focus of criminological study. This was the case, in part, because crime

opportunities provided by places were assumed to be so numerous as to make crime-prevention strategies targeting specific places of little utility for theory or policy. In turn, criminologists traditionally assumed that situational factors played a relatively minor role in explaining crime as compared with the “driving force of criminal dispositions” (Clarke and Felson, 1993: 4; Trasler, 1993).

The findings of tremendous concentrations of crime at place suggest a “tight coupling” of crime with the places where crime occurs and, thus, the particular importance of situation and opportunity in crime. Moreover, research showing that crime is not only concentrated at a few places but also that these concentrations remain stable over time reinforces this idea of strong coupling. Spelman (1995), for example, examined calls for service at schools, public housing projects, subway stations, as well as parks and playgrounds in Boston. He found evidence of a high degree of stability of crime at the “worst” of these places during a 3-year period. Taylor (1999) also reported evidence of a high degree of stability of crime at a place over time, examining crime and fear of crime at 90 street blocks in Baltimore, Maryland, using a panel design with data collected in 1981 and 1994 (see also Taylor, 2001). A study I conducted with Shawn D. Bushway, Cynthia Lum, and Sue-Ming Yang (Weisburd et al., 2004) not only confirmed the concentration of crime at place but also established that stability of such concentrations exists across a long time period. Using group-based trajectory analysis (Nagin, 1999, 2005; Nagin and Land, 1993), we identified a remarkable degree of stability in crime patterns at street segments especially for the most serious “hot spots” of crime in the city.

Tight Coupling and Crime Prevention

The concentration and stability of crime at place suggests that crime is not easily moveable at a microlevel of geography. This suggestion is, in turn, the reason why the commonly voiced objection to hot-spots policing and spatial crime displacement (Reppetto, 1976) has not been a threat to place-based crime prevention. A Campbell systematic review on hot-spots policing conducted by Braga (2001, 2005, 2007) examined displacement data for five eligible studies, finding that none reported substantial immediate spatial displacement of crime into areas surrounding the targeted locations. A similar set of findings has been generated in a more recent Campbell review of place-based prevention efforts more generally (Bowers, Johnson, Guerette, Summers, and Poynton, in progress). The displacement hypothesis is based on an assumption that people and crime are loosely coupled to place and will move easily to other places. The empirical literature on crime places suggests just the opposite.

Juvenile activity spaces, for example, are not found on every block but are located on a limited and specific number of street segments in the city (Weisburd et al., 2009). Doing something about juvenile crime at a shopping mall is, in this context, unlikely to lead to spatial displacement because another shopping mall is not likely to be nearby. At the same time, knowledge about the tendency of offenders to stay close to home suggests that the

problems at one specific place might not move easily to malls out of the neighborhood (Bernasco and Block, 2009; Brantingham and Brantingham, 1993; Wiles and Costello, 2000). Potential victims for crime also vary block by block (Weisburd, Groff, and Yang, 2009), suggesting that cracking down on a specific high-crime block, for example, with a large number of employees, will not simply shift crime to nearby blocks, which may be primarily residential.

In Durlauf and Nagin's (2011) article, the focus is on the possibilities for increasing perceived risk and deterrence by increasing police presence at high-crime places or by allocating existing officers in ways to maximize this strategy. Although this conclusion is warranted by the data, and represents an important component of the causal mechanisms that have increased the effectiveness of policing in recent decades, it misses an important part of the story. Focusing on how we can heighten the risk of apprehension of offenders naturally focuses us on the offenders themselves, but the tight coupling of crime to place suggests that we should be thinking more about "wheredunit, rather than just whodunit" (Sherman, 1995: 37).

In policing places, a shift must take place from arresting and prosecuting offenders to reducing the opportunities for crime at place. The idea that police were too focused on law enforcement is not a new one and indeed was a central concern of Herman Goldstein (1979) when he introduced the idea of problem-oriented policing. Goldstein and others have for almost 30 years tried to influence the police to be less focused on arrest and prosecution of individual offenders and more focused on solving crime problems, but these calls at best have been only partially heeded by the police, and much evidence suggests that law enforcement and the arrest of offenders remain the primary tools of policing, even in innovative approaches like hot-spots policing or problem-oriented policing (Braga and Weisburd, 2006). But why should we be surprised? In a police culture in which person-based policing is predominant, it is natural for police officers to continue to focus on offenders and their arrest.

Place-based policing provides an opportunity to shift this emphasis finally because it places the crime place rather than the offender at the center of the crime-prevention equation. It changes the central concern of police to improving places rather than simply to processing offenders. Success in this context must be measured not in terms of how many arrests the police make but in terms of whether places become safer for the people who live, visit, or work in such places. For example, my colleagues and I have found that collective efficacy is an important predictor of whether a street segment in a city will be a crime hot spot (Weisburd et al., 2009). Following research that has been conducted primarily at the community level (see Sampson, 2004; Sampson, Raudenbush, and Earls, 1997), this finding suggests that increasing collective efficacy on a block will reduce its suitability as a crime hot spot. The police in this context might not want to increase the level of deterrence on a street block but the collaborative nature of such "behavioral settings."

If the goal of the police is to improve safety at places, then it is also natural in policing places to be concerned with what Eck and others have termed “place managers” (Eck, 1994; Eck and Wartell, 1996). Third-party policing (Mazerolle and Ransley, 2005) is also a natural part of place-based policing. The police might want to seek out other methods of reducing opportunity at places, such as using civil ordinances to encourage apartment owners to regulate behavior on their properties. But more generally, place-based policing brings the attention of the police to the full range of people and contexts that are part of the crime problem.

Sometimes the Key Is the Place and the Police Should Not Be the Main Crime-Prevention Agents

Of course, thinking about the place does not change the idea that we might be focused on increasing the perceived risk of apprehension. However, it does suggest that the offender risk of apprehension might be too narrow a focus for crime prevention and that, in this context, the police might not be the best crime-prevention agents. For example, in a recent study, my colleagues and I confirmed the relevance of juvenile activity spaces (Felson, 2006) and routine activity theory (Cohen and Felson, 1979; Felson, 1994; Osgood, Wilson, O'Malley, Bachman, and Johnston, 1996) for understanding the high concentration of juvenile arrest incidents at places (Weisburd et al., 2009). Incidents in the highest crime street segments were most likely to be found at and around schools and youth centers or at shops, malls, and restaurants. This finding means that hot spots of juvenile crime are likely to be located in places where juveniles congregate. Not surprisingly, given our focus on juvenile crime, few arrest incidents are found at bars, clubs, and taverns, which are often hot spots of adult crime (see Roncek and Bell, 1981; Roncek and Maier, 1991).

We found that a third of all crime incidents in which a juvenile was arrested were located at just 86 street segments in the city. The fact that so large a proportion of juvenile arrest incidents are found in such a small number of street segments suggests significant opportunities for crime prevention more generally. However, is the threat of apprehension the only mechanism for controlling such crime, and are the police the right agents to address juvenile crime hot spots? Rosenbaum (2006) pointed out that unintended and negative consequences might be associated with hot-spots policing. Policing juvenile hot spots, in this regard, might lead unnecessarily to labeling and stigma of young people, which might have long-term negative consequences. Moreover, recent research on juvenile crime suggests that delinquency can be prevented by altering the supervision and structure of juvenile activities. Osgood et al. (1996) showed a strong causal relationship between “unstructured socializing” such as getting together with friends or going out for fun and recreation and juvenile delinquency. We might speculate in this regard that the juvenile crime hot spots we have identified are places where unstructured socializing is common, and one explanation for the high numbers of arrest incidents in those areas is that they are not structured and supervised adequately.

In this case, our concern should not be simply with deterring offenders but in changing the context of place so that juvenile activities are more structured. This shift, for example, might encourage our use of “place managers” (Eck and Wartell, 1998) or even outside agents such as teachers or social workers who could distract and encourage youth to participate in normative activities. My point is that the focus here should be on the routine activities of places more generally and not simply on the extent to which we can deter or discourage potential offenders.

Moreover, the police simply might be the wrong agents for crime prevention in certain circumstances at places. As I noted, the involvement of police is likely to lead to the use of law enforcement in doing something about crime problems. Is arrest and prosecution of juveniles the best approach for dealing with juvenile crime hot spots? A recent Campbell review comparing criminal justice processing with juvenile diversion from the criminal justice system suggests it is not (Petrosino, Turpin-Petrosino, and Guckenburg, 2010). Here, as in the case of imprisonment more generally, the outcomes are likely to be more crime and not less crime. I am not arguing against the police role in crime prevention at places. Even here, the police might play a role in convening and coordinating crime-prevention efforts or in identifying such problem places. My point is that the police will not always be the only, or indeed sometimes the best, agents for making places safer.

Conclusions

The research evidence is consistent with Durlauf and Nagin’s (2011) call for a “shifting of resources from imprisonment to policing,” but a shifting of resources from corrections to the police is not enough. If we are to use the new evidence about effectiveness in policing fully, then we also must shift the focus of the police “from people to places.”

If crime-prevention policies are to be implemented in ways that will increase crime control while reducing imprisonment, then the police will have to change their “unit of analysis” for understanding and doing something about crime. This change will mean transforming the organization of policing from one that is focused on specific types of crime, or large geographic areas, to specific types of crime places. It will mean a radical change in how the police code and collect data to include information not only on the nature of offenders and their processing through the criminal justice system but also on the nature and histories of the places that become hot spots of crime. But most importantly, the police will have to alter their overall view of the crime problem. It remains true today that police officers see the key work of policing as catching or deterring criminals. It is time to change that world view so that police understand that the key to crime prevention is in ameliorating crime at place.

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David Weisburd is Walter E. Meyer Professor of Law and Criminal Justice at the Hebrew University Faculty of Law, and Distinguished Professor in the Department of Criminology, Law and Society at George Mason University. Professor Weisburd was the recipient of the Stockholm Prize in Criminology in 2010.

Comment on Durlauf and Nagin

James Q. Wilson

*Pepperdine University
Boston College*

At one time, students of crime were roughly divided into two camps: those who believed that a good criminal justice system would keep as many people as possible out of prison (whatever the effects on the crime rate) and those who argued that reducing the crime rate through imprisonment was essential (whatever the effects on the prison population). Today, however, a growing number of scholars argue that we can simultaneously cut both the crime rate and the prison population. In his recent book, Mark Kleiman (2009) argued that we can have both less crime and less punishment.

And now we have this excellent paper by two of the best economists who study crime, Steven N. Durlauf and Daniel S. Nagin (2011, this issue), who show that we can cut crime by increasing the certainty while lowering the severity of punishment. They direct our attention to studies that suggest that increasing the likelihood of a police arrest (or at least the extent of police surveillance) can reduce crime. More can be gained by this strategy than by making marginal increases in the length of time an offender spends in prison. One reason for the minor gains from increasing sentence length is that American prison terms are already long; converting a 10-year term into 15 years may have little effect on whether the prospect of going to prison deters more would-be offenders.

A good deal of evidence suggests that certain police tactics reduce crime rates beyond what would happen if the officers responded only to 911 calls. One is hot-spots policing where officers are heavily represented in the small fraction of addresses where crimes have frequently occurred, whereas another is problem-oriented policing in which the police focus on specific transactions (such as open-air drug markets or pupils being assaulted while going to and from school).

Durlauf and Nagin (2011) wisely note that strategies for increasing the certainty of arrest vary in their effects across cities, and so they urge scholars to investigate why they work in some places and less in others.

Direct Correspondence to James Q. Wilson.

Much as I admire what they have written, they do not address certain issues that will profoundly affect the public debate about moving away from deterrence based on the risk of prison and that based on higher chances of being arrested.

Can We Shift Resources?

One is obvious: We do not have an integrated criminal justice system in which resources are allocated to their most productive use. Durlauf and Nagin (2011) acknowledge this problem. Prisons are managed by state governments (and in many by unionized prison guards), prosecutors are elected by voters in each county, and police departments are overseen by mayors and city councils. Whatever the evidence scholars produce, it is hard to imagine a state saying that it will close a prison and send the saved money to one or more police departments. This cautionary remark does not mean that scholars should stop trying; over the long run, ideas have consequences.

Why Has America's Crime Fallen Faster than in Many Other Countries?

A second issue is the relative costs and benefits of this country's decentralized criminal justice system. As I have written elsewhere, it is easy for commentators to criticize decentralization when a state legislature, or the voters in a state referendum, adopt a law that increases the length of a sentence for some crimes, such as rape, without doing anything about increasing the likelihood that the rapist will be caught, or when it imposes a three-strikes law without asking whether the additional sentence length will either deter crime or reduce the chances of crime by keeping an increasingly elderly inmate population off the streets.

But offsetting benefits to a decentralized criminal justice system do exist. Beginning in the early 1960s and continuing into the 1990s, America and Europe experienced a sharp increase in crime. America did something about it; many European nations did nothing.

America and England offer a sharp contrast. In 1976, England was more likely to send a robber to prison than was California, and robbery rates were lower in England. But in the 1980s and 1990s, English criminal law became softer: A new law discouraged judges from sending all but the most serious offenders to prison and encouraged them to ignore prior convictions, again unless the offense was very serious (Rosenberg, 1994). As a result, the American prison population rose and the English one declined. By 1996 the two countries had changed places with respect to property crime. Using national crime victimization surveys, the English robbery rate is one fourth higher, the auto theft rate one third higher, and the burglary rate twice as high as those in the United States (Wilson, 2008).

The pattern in other European nations is complicated, but there are some interesting trends in some nations. In the Netherlands (a nation that Durlauf and Nagin [2011] point to as a country that sends very few people to prison for more than 1 year), victimization

surveys show that its robbery rate has risen so rapidly that it now has a higher level than one finds in America, Australia, Canada, England, Scotland, or Switzerland (Farrington, Langan, and Tonry, 1994).

The United States leads all of these countries in average time served per robbery conviction but has a lower robbery rate than any of them. These gross comparisons do not settle the question of the connection between robbery and the combined effects of imprisonment and time served, but they obviously create a major opportunity for research.

Have Durlauf and Nagin (2011) Ignored Retribution?

Scholars tend to think of crime control in utilitarian terms. We try to reduce crime by deterring offenders, incapacitating convicted inmates, rehabilitating those who have offended, or preventing crime among people who have not yet broken the law. But there is another standard of action that by and large owes nothing to consequences: Does the punishment fit the crime?

For Westerners, the earlier statement of this view is found in the Old Testament where punishment is to be based on “life for life, eye for eye, tooth for tooth, hand for hand, foot for foot” (Deuteronomy 19:21 and Exodus 21:24–25). Immanuel Kant argued that judicial punishment can never be used to attain some other good for the convict or society but must instead rest on what the convict deserves. Utilitarian arguments for punishment allow innocent people to be punished if society will benefit or is unaware of their innocence. Of course retribution as the basis for punishment has a comparable defect because it leaves open the possibility of imposing savage penalties for modest offenses unless judges can make the sentences truly proportional. Kant’s argument followed, he believed, from his view that people should be governed by pure reason and the obligation to act on principles that can be made universal. If a man kills another man, the killer must be executed.

Retribution, whether endorsed by the Bible or Kant, has not done well among moderns. Cesare Beccaria denounced the death penalty because by using it the state commits a crime on the accused. John Stuart Mill disliked Kant’s view because it rested morality on reason while Mill thought it should rest on happiness. These sharply conflicting opinions have led supporters of utilitarian theories to dislike retribution because it seems to ignore human nature, degrade personal choice, and support tougher sanctions.

These views are correct up to a point, but they neglect how societies or social elites have modified what protections they will afford its members, including those who have been convicted of a crime. For the average person, unlike for the typical scholar, judgments about sanctions are based on a combined set of utilitarian and moralist views, often not spelled out carefully. In democratic nations with strong central governments and hierarchical criminal justice systems, these judgments tend to reflect what political elites believe; in the United States, with powerful state and local governments and a decentralized criminal justice system, these views tend to reflect local opinions.

These popular views sometimes lead to unwise and extreme decisions, but just as often they lead to the preservation of important distinctions among the seriousness of offenders and the gravity of their crimes. The British Parliament that passed the law urging judges to avoid prison was not made up of careful students of Kant.

One example may make clear why retribution, properly understood, is essential to formulating sanctions. Suppose that science creates a pill that, once used by a rapist, makes it impossible that he will ever rape again. (I have no idea whether this pill will be discovered, but given the remarkable advances in biomedicine, I would not be astonished if it happened soon.) The rapist's recidivism rate will fall to zero, the incapacitation gains from imprisonment will be zero, and the deterrent effect on would-be rapists, although unknown, might well be high. Should the penalty for rape then become the pill? I cannot imagine rape victims or their legislatures agreeing.

A more realistic problem is the use of prior records in imposing punishment. Consider a repeat offender or three-strikes statute. Utilitarians might well argue against them if the final case involved a minor offense, but retributivists would probably support them on grounds that displaying a criminal career is a graver matter than having committed a trivial final offense. (Much, of course, would still have to be decided, especially how long the final sentence should be.)

Reducing the prison population must be governed to a large degree by the magnitude of the offense and the prior record of the offenders. Durlauf and Nagin (2011) do not come to grips with this issue, but I suspect it will be the key question surrounding any decision to rely on the certainty rather than the severity of sanctions. There is no doubt in my mind that in many states there are prisoners who could be released now with little harm to deterrence, incapacitation, or retribution; the major analytical task is to specify who they might be.

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James Q. Wilson is Regan Professor of Public Policy at Pepperdine University and Distinguished Scholar and Senior Fellow at the Clough Center, Boston College.

Uncertainty about reduced severity, concerns about increased certainty, and alternative paths to lower rates of crime and imprisonment

Eric P. Baumer

Florida State University

Introduction

Durlauf and Nagin begin their provocative essay with a proposition that ought to grab the attention of legislators and other criminal justice policy makers, irrespective of their political leanings. In essence, they suggest that we could lower crime, reduce prison populations, and save money if we shifted our focus away from severity-based policies that tend to yield lengthy prison sentences, and increased the use of certainty-based strategies such as larger, better allocated, and more productive police forces. Enacting this shift in policy emphasis, they argue, would make “the risks of crime clearer and consequences of crime faster and more certain,” and would in turn based on the logic of deterrence theory, yield greater crime reductions (p. 14).

The possibility of fighting crime more effectively with a smaller financial outlay should be a message that is highly welcomed by policy makers as they struggle with significant budget shortfalls spawned by one of the most severe recessions of the last century. Indeed, while the policy prescription suggested by Durlauf and Nagin would require bold actions by officials, who in many jurisdictions face the electorate, it has the advantage of offering them a way to pursue actions that significantly reduce social spending while also reaffirming appearances of being “tough on crime” (i.e., by increasing certainty of detection). Additionally, their proposal to reduce the use of criminal justice sanction policies that emphasize lengthy prison sentences is timely. It comes during an era when crime levels are relatively low by

Direct correspondence to Eric P. Baumer, Florida State University, College of Criminology and Criminal Justice, 634 West Call Street, Tallahassee, FL 32306 (e-mail: ebaumer@fsu.edu).

U.S. historical standards (Blumstein and Wallman, 2006); when many politicians appear open to the message both in terms of cost-effectiveness and on other grounds (e.g., Webb, 2007); and when many states already have begun to rigorously pursue policy actions to reduce prison populations (e.g., Austin, 2010; Jacobson, 2005).

Durlauf and Nagin have made an important policy proposal that warrants serious consideration. In this essay, I develop three themes about the implications of Durlauf and Nagin's argument. First, I raise some questions about the impact for prison populations of shifting our policy focus away from the severity-based policies (e.g., mandatory minimums, habitual offender statutes). Second, I outline some additional issues about which policy makers may want to be mindful of when considering the allocation of significant additional resources to the types of policy actions identified by Durlauf and Nagin as key to increasing the certainty of detection. Finally, I suggest some additional policy choices that might be weighed in addition to reducing punishment severity and increasing the certainty of detection.

Some Uncertainty about Severity

One piece of the empirical foundation of Durlauf and Nagin's policy prescription (i.e., less severity, more certainty) lies in the existing evidence on deterrence, and in particular on what we know about the role of enhancements to sentence length on rates of crime. It turns out that the research evidence on the matter is disappointingly thin, but based on what has been done Durlauf and Nagin (p. 34) conclude that there is little basis upon which to justify mandatory minimum statutes that include lengthy prison sentences and, thus, that they should either "be repealed or greatly narrowed in terms of applicable offences." I join Durlauf and Nagin in wishing that we had a more sizable and pertinent body of research that could inform policy makers on this fundamental issue. Further, notwithstanding the caveat that we need more and better research on the topic, the conclusion they draw on the crime reduction effects of sentence-length-enhancement policies from available evidence (i.e., that it seems rather minimal) strikes me as reasonable. Clearly, the ground is very shaky for policy makers who wish to justify these policies based on a presumed crime reduction effect. Nonetheless, a key general question to consider is how best to reduce prison populations, and more specifically how much a reduction in overall incarceration rates we would get by limiting the use of mandatory minimums, or reducing sentence lengths more generally. Given that lower incarceration rates are one of the claimed outcomes of the policy prescription put forth by Durlauf and Nagin, this warrants some additional discussion.

As many observers have documented, incarceration rates in America have risen fivefold since the early 1970s. Incarceration rates have increased significantly among both men and women, younger and older offenders, and Whites, Blacks, and Latinos, but contemporary imprisonment rates are exceptionally high among young minority men, for whom prison has become a more likely destination than college (Western, 2006). We now imprison more people per capita than any other nation in the world (Walmsley, 2008). The fiscal costs

of mass imprisonment in America have been enormous (BJS, 2008), and even the most judicious review of the evidence on the benefits of this ranking in terms of crime reduction raises serious doubts about whether we are getting an acceptable return on the investment (Useem and Piehl, 2008). In part because of this unfavorable cost-benefit calculus, there is a growing recognition about the wisdom of reducing the U.S. incarceration rate, along with some attention to how this might be done safely and systematically (e.g., Austin, 2010). The question of how we might do this does not hold as easy of an answer as it might seem, though. Without question, reducing the application of long prison sentences would lower incarceration rates, but would this policy move alone yield a substantial reduction in incarceration rates?

Several studies have now traced the sources of the “mass imprisonment” buildup, with some research focused on identifying the specific policies, decisions, and stages that are most pertinent (e.g., Austin et al., 2007; Blumstein and Beck, 1999; Raphael, 2009), and others focused on identifying the broader social and political factors that have been instrumental (e.g., Western, 2006). The former studies are most germane to exploring the potential incarceration-reduction benefits of repealing or significantly restricting the use of lengthy prison sentences. There are a lot of nuances and uncertainties that emerge from tracing the specific decisions and policies that have contributed most to the substantial increase in U.S. incarceration rates during the past 30 years. However, three themes appear relevant to the policy prescription outlined by Durlauf and Nagin.

First, increases in time served appear to have contributed significantly to the large prison increases observed in America, even as prison sentence lengths given to convicted defendants have declined during the past few decades (Sabol, 2010). Austin (2010) shows that at least since the early 1990s the average sentence lengths levied to those committed to prison has declined 29% (see Table 3), while the average length of stay over this period has increased by comparable or even larger amounts for many committal offenses (see Table 11). Clearly, the policies targeted for repeal by Durlauf and Nagin (i.e., mandatory minimums) are part of this story, but so are policies that govern the proportion of sentences inmate serve. As Austin (2010: iii) notes, length of stay has increased because of “more conservative parole board decisions and/or the passage of numerous laws restricting good time.”

Second, there is good evidence that incarceration rates increased substantially during the past three decades not merely because of longer sentences and increased time served; hence, the efficacy of the policy prescription suggested by Durlauf and Nagin might be enhanced if accompanied by other policy shifts as well. Here the evidence about specific factors is a little murky because the data needed to parse out things fully is insufficient, but two things that seem clear are that we currently bring into the criminal justice system a much larger fraction of those arrested than was true a few decades ago (see Blumstein and Beck, 1999; Sabol, 2010) and that growth in parole and probation populations and the rate at which revocations have occurred are an important part of the story. The data presented by Sabol (2010: Tables 3 and 4) suggest that, at least since the early 1990s the former has

occurred primarily because an increasing fraction of those arrested have been prosecuted and convicted. The percentage of convictions (for new offenses) that yielded a prison term also increased for some crime types (e.g., murder and sexual assault), but in general increases in the probability of imprisonment given a conviction have not been highly instrumental. This is consistent with conclusions drawn from Blumstein and Beck (1999). Austin et al. (2007) further document that parole and probation revocations contribute significantly to overall prison admissions and that lengths of stay for those revoked have grown over time. Reducing the prison population considerably will likely require a series of policy shifts, including a reduction in prison sentence lengths but also “changes in law enforcement, prosecutorial practices, sentencing, and correctional policy” (Austin, 2010: iv).

Third, while there appears to be some consensus about Durlauf and Nagin’s general suggestion that prison populations in America can be reduced in relatively short order without significantly affecting public safety, there is also acknowledgment that the surest policy path to this outcome is likely to differ across states. As Austin (2010: iv) puts it, “to lower the overall incarceration rate will not be one path, but rather 51 paths for the states and federal governments. It will require 51 strategies, each tailored to fit the policy circumstances of the government in question, to return these system to a more normal level. In this regard, some states have a great deal more work to do than others.” Austin (2010) makes specific reference to how states with determinate and indeterminate sentencing policies will need to make different policy shifts to reduce prison populations. In the specific context of Durlauf and Nagin’s argument, another pertinent point is that some states frequently apply the severity-based policies they highlight, while others do so much less often.

In short, while it is likely that prison populations would decline if governments move away from policies that emphasize hefty sentence lengths, it is uncertain how much of a dent this policy shift alone would make. As policy makers contemplate ways to reduce prison populations, it would be valuable to use, as a guide, available evidence on the policies and decision-making points that have been most influential in growing prison populations, something that is likely to differ across states with different sentencing structures and sentencing laws.

Concerns about Increased Certainty

Another piece of the empirical foundation to the policy prescription suggested by Durlauf and Nagin is to increase the certainty of detection. In particular, they argue that “increasing the visibility of the police by hiring more officers and/or allocating existing officers in ways that heighten the perceived risk of apprehension would yield substantial marginal deterrent effects” (p. 1). As they acknowledge, the evidentiary basis is not as expansive or clear as one would like for drawing conclusions about the efficacy of increased certainty through the policies they identify. Nonetheless, after reviewing studies about the influence on crime rates of police force size and various targeted policing approaches, Durlauf and Nagin (p. 32) conclude that, “taken as whole, the literature on the preventive effect of policing

contains much persuasive evidence that police prevent crime.” They go on to suggest that policies focused on “targeting enforcement resources on selected high crime people or places” are likely to have the greatest crime reduction benefits (p. 37). In my judgment, Durlauf and Nagin make a credible case for the potential promise of enhancing sanction certainty through increased allocations of policing resources and strategic deployment of such resources. However, two issues that I think deserve additional consideration concern the scalability of the specific policies they endorse, and the possible collateral consequences of pursuing those types of policies.

On the first matter, as Durlauf and Nagin probably would acknowledge, even if we focus only on the most persuasive evidence for the crime-reduction benefits of specified targeted policing strategies, it is unclear whether scaling up such efforts en masse would yield a comparable scaling up in crime reduction, or whether it is feasible from a financial basis to do this type of high-intensity policing on a much grander scale. Most police agencies in America already allocate personnel disproportionately to high-crime areas, and these places hardly seem underpoliced. Indeed, citizens in highly disadvantaged areas, where much street crime disproportionately occurs, currently confront a relatively high degree of exposure to the police, and the probability of arrest is especially high for young minority males in such contexts (e.g., Anderson, 1999). Though we do not have good evidence about the effects on certainty of increases in police force size and/or strategic allocations of police forces, presumably, the perception of certainty is already quite high in these areas.

On a second and related note, even if we assume that there is a lot of growth potential in the perceived certainty of detection in areas with especially high crime rates and that increasing the presence and effectiveness of the police in such areas could lower crime rates, many observers have drawn attention to some negative collateral consequences of the heavy policing that often occurs in these places. In other words, as we consider the policy prescription highlighted by Durlauf and Nagin, we should be mindful of both the potential benefits and broader costs of enhancing the certainty of detection. It seems likely that shifting additional resources to enhancing police presence and/or effectiveness will yield more interactions between citizens and the police and additional arrests. Indeed, this is presumably the means by which perceived certainty would be increased, at least initially. In theory, this makes logical sense and might well be an effective way to deter crimes. In practice, however, there are good examples throughout history where efforts directed at increasing the certainty of detection have yielded a larger volume of negative police-citizen encounters and reduced trust in the police by citizens. More generally, it is possible that increasing significantly our focus on police-based measures of raising levels of perceived certainty of detection may have a variety of consequences beyond the potential for crime reduction. These include perceptions of illegitimacy in how the law is applied, increases in perceived discrimination in the criminal justice system, heightened racial disparities in prison populations, and the use of race as a marker for deploying police personnel or as one rationale for stopping, searching, and arresting citizens (e.g., Alexander, 2010). Additionally, some research on

the consequences of being involved in the criminal justice system imply that if shifting our crime-prevention policy toward enhanced policing increases arrest rates substantially, it may have a significant impact on future employment and marital prospects of those to whom such a policy shift is likely to be disproportionately applied—young minority males—who many argue already suffer from existing inequalities (e.g., Western, 2006).

In general, the idea of increasing certainty of detection is a logical policy direction in which to move from the lens of deterrence theory, and as Durlauf and Nagin argue, doing so may yield significant reductions in crime without some of the inefficiencies and harmful collateral consequences of severity-based policies. Nevertheless, all policy choices reflect a complex mix of potential benefits and costs and as the conversation continues on the potential challenges to and benefits of increasing certainty through enhanced policing activities, it will be important to remain mindful of some of the possible costs of this policy direction.

Other Paths to the Same Place

One last issue I would like to add to the policy discussion stimulated by Durlauf and Nagin's essay concerns alternative paths to lower crime, lower incarceration rates, and less cost associated with criminal-justice-policy choices. A reduction in crime rates is one of the goals of the policy prescription offered by Durlauf and Nagin. As it turns out, crime rates have fallen significantly during the past two decades, with especially large declines in the 1990s but continued decreases in many areas for long stretches during the 2000s as well. Based on what we know about the factors that drove those crime declines (see, e.g., Blumstein and Wallman, 2006), it seems reasonable to pose the question as to what might have happened to crime levels if we were able to turn back the clock and adopt in the early 1990s the proposed policy prescription suggested by Durlauf and Nagin. We can only speculate on an answer to that question, but based on the available evidence it looks like a good guess would be that the overall pattern in terms of crime rates would be very similar to what we observed. Increases in incarceration and policing shifts were significant factors in the observed crime decline, but even the most generous estimates of their dual contribution suggest there would have been a very large decrease in crime rates in most places in America during the 1990s with or without changes in policies about sentence lengths and with or without significant shifts in policing practices (Zimring, 2006). Take New York City as an example, where there were highly lauded shifts in both the quantity and quality of policing geared toward, among other things, increasing perceptions of certainty, and where jail and prison populations declined. The empirical evidence suggests that, while these policy shifts were part of the story, the vast majority of the substantial crime drop observed in New York City during the 1990s was due to other factors (e.g., Messner et al., 2007; Rosenfeld, Fornango, and Rengifo, 2007).

The point here is not to dismiss the potential utility of reducing reliance on punishment severity and increasing emphasis on certainty-based policies. This policy prescription has

merit and should be given serious consideration by researchers and policy makers. But, so should other potential social policies that might help to reduce crime, prison populations, and criminal justice costs. Durlauf and Nagin (p. 2) acknowledge this, noting for instance that “there is mounting evidence of the effectiveness of early childhood development programs in reducing criminality.” They limit their attention to formal criminal justice policies, though, both because other potential crime reduction remedies are dealt with in other studies and because they find value in considering “the restricted question of whether the current level of investment in the criminal justice system is most effectively allocated among its various components.” This is an understandable limit in scope, but an unfortunate consequence of it is that it directs policy makers to a highly restricted set of choices and allocates all of our nation’s crime-preventive efforts to the criminal justice system.

There are other policy choices, of course, that may yield significant reductions in crime rates while simultaneously permitting reductions in reliance on severe penalties and avoiding the need for enhanced police-based certainty discussed by Durlauf and Nagin. What are these other policy choices? The research needed to answer this definitively is smaller and even more ambiguous than the available evidence on the crime-reduction effects of punishment severity and certainty reviewed by Durlauf and Nagin. However, drawing again on the literature pertinent to the significant crime decline observed in America since the early 1990s, policies that increase employment and wages among contemporary low-skilled workers may have an immediate pay-off and policies that enhance child-rearing efforts and contribute to positive early child development may yield longer term crime-reduction benefits (Baumer, 2008; Donohue and Levitt, 2001; Gould, Weinberg, and Mustard, 2002). Considering these sorts of policy choices along-side criminal-justice policies may yield a different estimate of the relative efficacy of the different options and would certainly move us toward a more comprehensive way of approaching criminal justice policy.

Thinking more globally about the matter, there are many examples of low-crime societies that rely relatively little on lengthy prison sentences, but few I can think of that have achieved low crime primarily through enhanced formal police-based certainty policies. Durlauf and Nagin (p. 41) acknowledge this by suggesting that we look to low-crime nations for clues about how police strategies might be used to “mobilize informal sources of social control within the community to prevent crime.” To this I would simply add that looking beyond our borders might also reveal something more fundamental than the role of the police in helping mobilize informal social controls. What low-crime societies seem to have in common is a relatively low degree of reliance on criminal justice institutions (policing and prisons) altogether, and instead they contain a broader set of social policies and social norms that reinforce the risks and consequences of engaging in illegal activities and the benefits of obeying the law. In short, Durlauf and Nagin have made a valuable contribution by identifying a policy path through which we might be able to reduce crime, imprisonment, and criminal justice expenditures. We should take their proposal seriously,

but also have the responsibility to judge its merits against alternatives that include policies outside the criminal justice system.

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Eric P. Baumer is the Allen E. Liska Professor of Criminology at Florida State University. His research focuses on temporal and spatial dimensions of crime and justice, and especially how structural and cultural features of communities affect crime, social control, and other aspects of human behavior. He has examined these issues empirically in multilevel studies of the influence of community characteristics on individual attitudes and behaviors, macrolevel studies of spatial and temporal patterns in crime and social control, and in case studies of crime and justice in Iceland, Malta, and Ireland.

Laudable goals: Practical hurdles

Dick Thornburgh

K&L Gates LLP

Professors Durlauf and Nagin (2011, this issue) begin their valuable article with some stark facts. The rate of incarceration in federal and state prisons in the United States has grown from 96 per 100,000 in 1972 to 504 per 100,000 in 2008, whereas correctional budgets have correspondingly grown from \$9 billion in 1982 to \$69 billion in 2006. Clearly, these figures cry out for the type of analysis and prescriptive thinking that the authors have undertaken.

The goals enunciated by Durlauf and Nagin (2011) are laudable. They suggest that “crime, prison costs, and imprisonment numbers can be reduced simultaneously if policy makers shift their focus from a primary reliance on severity-based policies, mandating lengthy prison terms, to a focus on a more effective use of police to make the risks of crime clearer and the consequences of crime faster and more certain.” The tools that they suggest to accomplish these goals resonate with my own background and experience in law enforcement and within the criminal justice system. Indeed, at one time or another, I have tried to make the case for nearly all of the tools the authors describe as potentially useful in reaching their goal.

During my career in the U.S. Department of Justice, for example, the wholesale use of mandatory sentences for particular offenses held little attraction for me. Moreover, I became aware that the legislative response to the issue de jour as raised by criminal excesses was, more often than not, to create longer sentences for the offense in question. This was perhaps best characterized in the white-collar crime area by the Sarbanes-Oxley Act’s (2002) response to widespread financial fraud by vastly increasing the range of sentences in this area.

My own sense is that discretion in most of the sentencing process is desirable so that the particular circumstances of the offense and the offender may be taken into account in devising a sentence in a particular case. The criminal justice system runs the risk

Direct correspondence to Dick Thornburgh.

of losing its credibility if purely mechanical prescriptions for sentencing are carried to extremes.

For similar reasons, I always have favored workable sentencing guidelines for judges in criminal cases. When too much disparity in sentencing practices produces the appearance that like offenders are not treated uniformly in the criminal justice system, the “street credibility” of that system suffers. Thus, if the man in the street feels that particular defendants, once convicted, are treated either more harshly or more favorably than similarly situated convicted defendants, it is inevitable that suspicions develop as to the reasons for such disparity. Maintaining the fine balance between extremes in this area always has been a challenge.

Those of us who support the use of guidelines envision a matrix of presumptive sentences for particular offenses with the opportunity for judges to deviate either upward or downward if they enunciate the reasons for their deviation. Deviations would be appealable and would eventually, it is hoped, lead to a body of appellate law that would provide even more useful guidance in the sentencing process.

I realize that the federal sentencing guidelines have of late fallen into disrepute as a result, in my view, of the complexity and difficulty of applying them equitably. Their reach, in short, exceeded their grasp, and as a result, they were cast out as a useful tool to use in the sentencing process. Guidelines are only guidelines and should not aspire to a level of micromanagement of the sentencing process lest they create their own image of a purely mechanical phenomenon. Perhaps their application henceforth as “advisory” in nature will preserve some of the intent of those of us who entertained high hopes for their positive influence on the sentencing process.

Durlauf and Nagin’s (2011) suggestion for restraint in the use of mandatory and excessively severe sentencing is thus laudable. Whether any such change will produce the shorter sentences they find desirable is, of course, debatable. Surely the result that they posit would be a boon to the more rational allocation of limited resources if the dollars saved from shorter terms behind bars could be transferred to other components of the criminal justice system in the manner in which Durlauf and Nagin suggest. Needless to say, as noted in the following discussion, the political process to be used and mastered in effecting such a shift is a most challenging one.

Let us assume that the wisdom of less severe sentences is accepted and that dollars actually become available for reallocation within the criminal justice system. How should they be spent? Here again, Durlauf and Nagin’s (2011) prescriptions for better policy guidance and allocation of resources recommended for the police as well as for the probation and parole components of the criminal justice system clearly are desirable. Their case for attention to the policy aspects of policing so as to make the risks of crime more credible is unassailable, and their suggested strategies for more effective allocation of police resources in this regard, including attention to “hot spots” offer real promise. Moreover, techniques such as the Department of Justice’s Triggerlock program, which we instituted in the 1990s,

and the counterpart programs referred to by Durlauf and Nagin, which seek to funnel high-risk firearms offenders into the federal system for prosecution and stiffer sentences, deserve the careful evaluation Durlauf and Nagin suggest. Coupled with implementation of such major changes, of course, would be the critical need for a relearning process for prosecutors, officers on the beat, and their supervisors as well as a review of police pay scales and training regimens to ensure that all are following the playbook that Durlauf and Nagin suggest.

I consistently have felt that one of the most fruitful areas for investment in the criminal justice system would be an upgraded and sophisticated probation and parole system. If the object is to maximize the chances for offenders to avoid becoming recidivists and to “graduate” into the role of “good citizens,” they must be provided with proper tools and guidance to reach these goals. In our correctional systems, this means more drug rehabilitation, meaningful educational and vocational training capabilities “behind the walls,” and similar services plus the necessary support and monitoring of postrelease activities to maximize the opportunities for success.

One of the areas of which I was most proud during my tenure as attorney general of the United States was the sizeable increase in support for these types of programs in the federal Bureau of Prisons. Despite the discouraging figures cited by Durlauf and Nagin (2011) regarding recidivism, expenditures of this nature have the potential to increase self-esteem and the potential for a useful role as citizens that cannot be ignored.

The biggest obstacle to achieving these goals, obviously, has been in meeting the cost of such service and support. To put it bluntly, law-abiding taxpayers do not take kindly to expenditures for programs of the type referred to previously for those who have violated the laws when sufficient public funds are not made available to provide similar services to them and their law-abiding sons and daughters. Like it or not, this political calculus erects a huge barrier to the improvement of these components of the criminal justice system. The logic of transferring the savings from shorter prison terms in part to improve probation and parole services, as Durlauf and Nagin (2011) suggest, is unassailable. Politically, it will be a hard sell, given the wide variety of other uses to which such “savings” might be applied.

Durlauf and Nagin’s (2011) call for more research in the areas upon which they have touched is likewise laudable. Some public opinion research might be useful as well to scout out possible strategies for addressing the political challenges in the transformations they suggest. In any event, it would be wise to lay out a tentative budget for the research undertakings suggested in the article.

Speaking of budgets, to close the circle on the parameters of the debate that will no doubt ensue as a result of Durlauf and Nagin’s (2011) suggestions, it would be useful (and perhaps even necessary) to put some projected figures into the mix as well. Our current national (federal, state, and local) expenditures on police and corrections total \$168 billion. What additional costs likely are to be involved in the suggested changes in policing policy? Are shifts from other areas a zero-sum proposition, or are there savings or additional

expenditures projected? Clearly the enhancement of probation and parole services along the lines Durlauf and Nagin suggest will involve substantial additional costs. Is it expected that these will be met through the projected savings resulting from shorter prison sentences? What order of magnitude are we speaking of? What is the time frame within which the first of these “savings” will begin to be realized? And, of course, what would be the consequences of a failure to realize such “savings” in terms of additional taxpayer cost?

All in all, Durlauf and Nagin (2011) have made a commendable series of observations and recommendations designed to upgrade and improve our criminal justice system and, perhaps more important, to improve the quality of life and opportunity to contribute to those who have encountered that system. One small quibble for the lay reader is the use of formulas and mathematical models for providing food for thought in this area. Those, like me, who are unskilled in such arts, gain little from their inclusion and, if a popular audience (as distinguished from purely an academic audience) is sought for this work, these might better be relegated to an appendix.

Thanks are due to Professors Durlauf and Nagin (2011) for tackling some of the more contentious issues in today’s debate concerning the future of our criminal justice system. Sloganeering and the substitution of clichés for thoughtful consideration of these issues too often has characterized past attempts to devise solutions. The no-holds-barred, practical assessment of the problems of crime and punishment in today’s society evidenced by this article provides an ideal jumping-off point for informed debate on the topics addressed. Let us hope that such debate ensues.

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Dick Thornburgh is the former governor of Pennsylvania and former attorney general of the United States under Presidents Ronald Reagan and George H. W. Bush. He also served previously as the U.S. attorney for Western Pennsylvania and assistant attorney general in charge of the criminal division of the U.S. Department of Justice.

Deterrence, Economics, and the Context of Drug Markets

Shawn D. Bushway

The University at Albany

Peter Reuter

University of Maryland, College Park

Part I: An Argument for a Nuanced Discussion of Deterrence by Criminologists using Key “Economic” Concepts

Steven Durlauf and Daniel Nagin (2010) have reviewed the evidence for general deterrence, following up classic earlier reviews by Nagin (e.g., Nagin, 1998). This is a touchy subject, and one that often leads to contentious arguments that pit criminologists and fellow travelers against economists (e.g., Levitt and Dubner, 2005; Zimring 2008). Economists, committed to general deterrence by their belief in rationality (Bushway and Reuter, 2008), discuss deterrence without citing work by criminologists (Levitt, 2002; Levitt and Miles, 2007), and criminologists return the favor (Pratt et al., 2006). Durlauf and Nagin’s paper attempts to talk about deterrence research in more nuanced terms, with equal reference to research by economists and criminologists.

Michael Tonry, decidedly not an economist, has called for just this kind of nuance in research on deterrence, based directly on the observation that there are “differences in individuals’ susceptibility to changes in legal threats” (Tonry, 2008, p. 281). This observation is not a refutation of rational choice, but simply a call to recognize that there are different preference functions in the population (see also Cook, 1980), or alternatively, there are heterogenous treatment effects, a common observation now in the economics evaluation literature (Angrist, 2004; Djebbari and Smith, 2008; Heckman and Smith, 1997).

Although the rational choice framework itself is clearly not perfect, it has considerable power to predict and explain—and it can easily handle differences between individuals in

Direct correspondence to Shawn Bushway, The University at Albany (e-mail: SBushway@uamail.albany.edu); Peter Reuter, The University of Maryland, College Park (preuter@umd.edu).

the population. Productive conversations about policy can be had while staying within the confines of the model—a valuable constraint given the absence of other formal theories with comparable predictive power. A great example of this power comes from political scientist Bernard Harcourt’s critique of statistical discrimination, which is made using the rational choice model itself (Harcourt, 2007).

Durlauf and Nagin’s critique of policies that increase sentencing severity is an excellent example of a critique of deterrence policies that is rooted in rational choice theory. If criminals are rational, the fact that punishment (or money) 10 years from now is worth less than the same amount of punishment (or money) this year means by definition that a rational criminal will be less deterred by an extra year of punishment in a world where he already faces a threat of 10 years, versus a world where he currently faces only 6 months of incarceration. One year of punishment 10 years from now is simply not as “costly” as 1 year of punishment 6 months from now. This is especially true, if as we believe is the case, crime-prone individuals are likely to be impulsive (likely to discount the future heavily). Staying within the simple rational choice model, as we advocate, Durlauf and Nagin make this explicit using simple calculations in a clear and compelling manner.

The concepts of marginality, so central to the economic approach, is also relevant here, and again, Michael Tonry takes the lead in his 2008 article with his consistent reference to marginal deterrence. The question is not, as it is often phrased, does deterrence work, but, can the deterrence threat be heightened given the current level of threat. The United States already has a severe system of punishment; sentence lengths are high both by historical and international standards. The policy question is whether those who are not already deterred (by evidence of their continued commission of crime) can be deterred by additional punishment threats. This is a fundamentally different question than “does deterrence work.”

The concept of elasticity which is central to Durlauf and Nagin’s approach is linked directly to the issue of marginality. Elasticity as a concept is well developed in economics but is not often used in criminology, which tends to focus on effect size. That is unfortunate, because elasticity, unlike effect size, has inherent in its definition a relative assessment of returns. To be precise, an elasticity refers to the percent change in Y “caused by” the percent change in X. Percents can only be calculated if we know the current level of an activity. The same effect size can have a large elasticity if the initial investment in X was low, and a low elasticity if the initial investment in X is high (or vice versa). Responsivity, in a world of elasticity, depends on the location with respect to current efforts. The current discussion about incarceration depends crucially on the understanding of where we are along the margin. Additional expenditures on incarceration now occur on top of substantial sums already devoted to that effort; effects will be smaller because of declining elasticity compared to additional expenditures in a world where incarceration rates are less than they are currently (Donohue, 2009).

Durlauf and Nagin's discussion about when certainty-based policies might be more productive than severity-based policies, with its explicit use of rational choice theory, marginality and elasticity, naturally moves the discussion away from an all-or-nothing debate about the use of punishment threat to create deterrence. This is a natural and productive movement in the debate about deterrence. It mirrors the discussion about rehabilitation programs, which moved from a "nothing works" mentality, to a more nuanced "what works for whom" approach" (Cullen, 2004). We do not see why discussions of deterrent effects are any different from the discussion of job training or rehabilitation programs. In all cases, it is useful to adopt a nuanced perspective where the search is for different treatment effects for different types of programs aimed at different populations, with special awareness of the context in which the programs are being implemented (Bushway and Smith, 2007).

There are limits to how far the analogy should be pushed. While it is easy to think about offering more intensive treatment to conceited offenders at higher risk for reoffending, we hesitate to present different certainty of punishment to different groups of people. For example, sex-offender registries are in effect attempts to change the certainty of detection for a particular type of offenders. However, this type of differentiation already occurs with respect to severity of punishment based on criminal history. In effect, individuals with longer criminal history records (and higher recidivism risk) are facing a different deterrent threat. Drug court and other more active monitoring strategies, such as the HOPE Program (Hawken and Kleiman, 2009), are instances in which technology is used to increase the certainty of detection for particular individuals who have already been convicted; these might actually lead to better outcomes, for both the individual and the system as a whole. More explicit thought about the ways in which deterrence strategies can be ethically tailored for heightened effectiveness is clearly warranted.

Part II: Economics is About Markets Too

Part I contended that a productive and nuanced discussion about the relative merits of the punishment threat can be carried out within the context of the economic model of rational choice. Within this discussion, we pointed out that the model can predict, a priori, cases where particular deterrence strategies will be ineffective (e.g. severity-based strategies in a world where current punishments are already severe). But this use of the rational choice model is inherently limited, because it fails to exploit the "market" part of the basic rational choice model. This is particularly important when speaking about deterrence strategies in a world where much of the punishment is being directed at drug markets, and drug dealers, either directly or indirectly. This observation is true whether the issue is severity or certainty based strategies.

Specifically, Durlauf and Nagin's analysis about the potential for deterrence strategies needs modification to deal with enforcement against drug markets, particularly drug sellers. The distinctive feature of such enforcement is that price serves as a mediating factor; higher

risk in terms of either certainty or severity can be compensated for by higher returns to sellers, in the form of higher prices. The result is that the decline in drug selling may only be slight because of the overall increase in revenue caused by a shift in the supply curve; moreover, it is possible, indeed likely, that the higher price results in higher levels of property crimes by drug users. Either reality will counteract the increased deterrent threat with respect to crime, making it harder to activate the responsivity highlighted by Durlauf and Nagin.

II. A Theory

A principal goal of drug enforcement is reduction in the number of drug users and the amount of crime that drug use causes; the dealers are essentially instruments for the adverse consequences of drug use with which we are concerned. The dealers themselves are thus not the ultimate object of enforcement, a contrast with robbery or crimes of violence where the perpetrator is the sole object of the enforcement. Raising dealer risks and costs by increasing sentence severity or certainty is simply a method for making drugs less available and more expensive and thus inducing users to cut back or desist altogether.¹ Quantity serves as a summary measure of the two dimensions of harm, the number of users and the average quantity consumed; quantity also captures health harms (Reuter and Caulkins, 1995). Expenditures is of separate interest as it provides a measure of the potential income generating crime (both property and market) arising from drug use.²

The question then is whether Durlauf and Nagin's analysis and conclusion generalize to this situation. Is it possible, by raising the risk of apprehension of drug dealers, to simultaneously reduce the number of dealers incarcerated, the quantity of drugs consumed and the total expenditures?

This is not a minor matter for those interested in reducing the population in prisons and jails. Caulkins and Chandler (2006) estimate that the number of individuals incarcerated for drug offenses (including jails) rose approximately 10-fold over the period 1980 to 2005; the total in 2005 was close to 500,000, about 22% of the incarcerated population in the U.S. As with other crime, the rise in drug incarcerations is remarkable since it has continued long after the size of drug markets have apparently decreased (ONDCP, 2001).

As articulated by Reuter and Kleiman (1986) and more recently updated by Caulkins and Reuter (forthcoming), the "risks and prices" theory of price formation for an illegal drug

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1. We are not dealing here with the separate issue of whether more intense enforcement against drug dealers increases aggregate harm by, for example, inducing violence, a key argument in the case for harm reduction approaches to drug policy (see MacCoun and Reuter, 2001).
 2. There is a substantial literature on the positive relationship between crime and drug use. See MacCoun, Kilmer and Reuter (2003) for a review; a more skeptical assessment of the strength of the relationship is given in Stevens (2010).

posits that price is determined largely by the intensity of enforcement, that is, the probability that a dealer will be punished. The punishment affects two hazards faced by drug dealers; it increases directly the risk of incarceration and other criminal justice penalties (including seizures of drugs and assets³) and indirectly the risks of violence from other participants. The indirect effect comes through concerns about informants and through prices.⁴ The model does not distinguish between the probability and severity of punishment, and we conclude that the certainty-based deterrent threats proposed by Durlauf and Nagin are equally valid in this context.

Durlauf and Nagin have introduced the concept of an elasticity, the percentage response of one outcome variable on to a 1% change in some other variable. As noted in Part I, this is an important concept, and it plays a central role in any economist's discussion of market dynamics. But there are two critical elasticities here; the elasticity described by Durlauf and Nagin, which is the elasticity of the supply of risky labor with respect to expected punishment, which we will designate $e(L)$ and the elasticity of the demand for the drug with respect to its price $e(D)$, which has no counterpart for non-market crimes. Assume, as required by Durlauf and Nagin, that $e(L)$ is very high, that is, that there are many other individuals willing to sell the drug for a slightly higher reward than that generated by current prices (and that a slight increase in deterrence from an increase in certainty of punishment will drive potential drug sellers out of the market). Assume also that the $e(D)$ is low, so that the quantity consumed is not much reduced by the higher price needed to bring in the marginal seller; in the following discussion the parameter is set at -0.3 .⁵

Now assume that police are able to increase the probability of arrest for a cocaine selling offense from 2% to 3%; postarrest risks stay unchanged. This has two kinds of effects on the supply side. First, some current dealers are removed from the population; for simplification assume that the system was in steady state before, with an equal number of dealers exiting (through incarceration) and returning to the market each year. The higher arrest rate means that there will now be a shortage of sellers; buyers will bid up the price as a consequence. That will attract in some new sellers, who were not willing to deal drugs at the previous price. The higher price will also lower the amount that users are willing to buy so that the total number of dealers will decrease.⁶ Whether the total number of dealers incarcerated in the new equilibrium decreases along with the decrease in drug sales depends on $e(L)$. As noted by Durlauf and Nagin, if this parameter is high enough then the price rise will be small

3. Note that it is only a rise in apprehension that affects seizures.

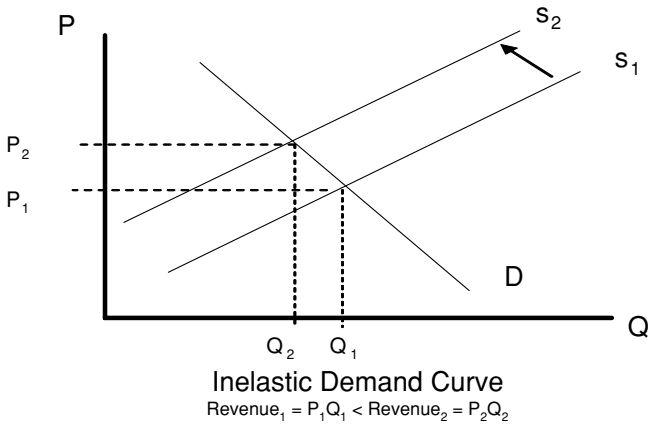
4. The use of violence against informants is a common source of injury and death in these markets. The higher the risk to which an informant can expose a dealer, the greater the incentive to retaliate against him. Higher prices increase the incentives for theft of drugs.

5. That is within the ranges reported by Grossman (2004) in his review of the elasticity of demand for addictive substances.

6. We assume here that the optimal amount for a drug dealer to sell per unit time does not change.

FIGURE 1

The Effect of Increased Dealer Deterrence on Drug Prices and Consumption



enough that the total number of incarcerations (apprehension probability times number of dealers) will rise.

But this is only the first part of the analysis. There is also the effect on drug users; does total expenditure, a surrogate for related crime, go down? There is a standard exposition for this, as shown in Figure 1. The higher arrest rate lowers the amount that will be offered at each price. That is indicated by the shift in the supply curve. The shift of the supply curve moves the equilibrium along the demand curve: since the elasticity of demand is less than one in absolute value, the result is that consumption declines but total expenditures increase.⁷

In this simple model, only the elasticity of demand matters for the second effect. We will observe an increase in expenditures on the illegal drug, whether the shift in the supply curve is large (i.e., the price has increased a lot to attract in the marginal dealers to replace those who are being incarcerated now) or small, so long as it leads to a shift along the demand curve characterized by inelastic demand. The key to this result is that this increased return from crime will potentially counterbalance the increase in punishment offered by the increase in certainty, and the expected punishment may not in fact increase. Since there are few estimates of price elasticity for cocaine or heroin that are greater than one in absolute value, it seems that even increased police efficiency does not save us from the opposite of Durlauf and Nagin's conclusion; better policing that increases a dealer's risk of

7. For example, If price rises by 10% and the result is a decline in demand of 3%, then revenue will be $1.10 \times 0.97 = 1.067$.

arrest and punishment may generate both more incarceration and more crime, even with high elasticity of labor supply.

There are numerous assumptions built into this analysis and hence a number of avenues for chipping away at this conclusion. We consider just two here:

- (1) Markets may become less efficient as they become smaller. At some stage the higher incarceration rates may make dealers few enough in number that the costs of users and sellers finding each other become high. This in effect shifts the demand curve down, since the nonmonetary costs have risen.
- (2) Dealers are also users; indeed many of them are very frequent users (Pollack, Reuter and Sevigny, forthcoming). Thus incarcerating dealers also reduces demand. A much higher incarceration rate shifts the demand curve down at the same time as it shifts the supply curve out. The consequence may be a reduction in quantity consumed and in price.

II. B Policy Implications

Critiques of the war on drugs abound (e.g., Tonry, 1995); it is essentially impossible to find academic defenders of the U.S. campaign to suppress drug markets through extensive incarceration. The arguments against the current campaign are empirically strong but analytically casual. Does the above analysis help?

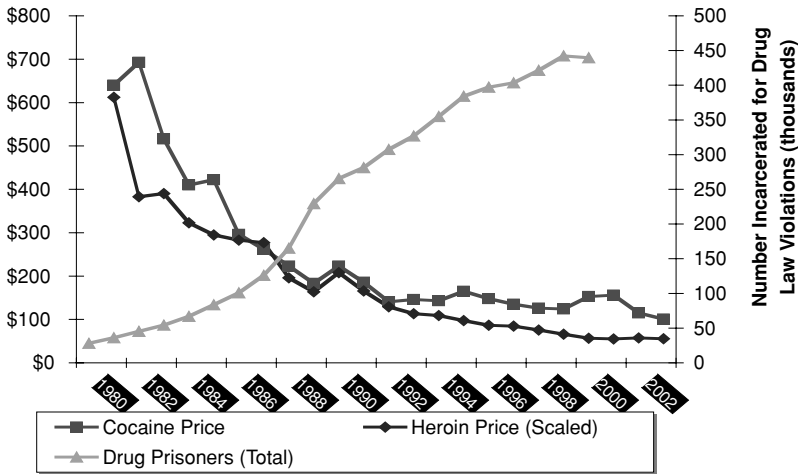
The empirical case is straightforward enough. Apart from the extraordinary racial disparity in incarceration, even greater than for crime generally, the mass incarceration of drug dealers has not managed to make drugs more expensive and harder to obtain. The failure with respect to price of cocaine and heroin is captured in Figure 2. Incarceration has risen sharply and prices have unexpectedly fallen over the same time period.

The explanations offered for this failure generally focus on the ease of replacement. Locking up one dealer simply provides an opening for another is a standard commentary. What we offer here is a more theoretically grounded basis for that claim. There may well be a limited supply of individuals willing to take the specific risks prevailing at the current prices and earnings, so that the removal of a dealer now creates not a niche but a gap. However, the supply of risk-taking labor is upward sloping, so that for higher incomes (associated with higher prices), there will indeed be another individual willing to take the place of the incarcerated dealer. As described above, that higher price will reduce consumption but probably will increase total expenditures on drugs and thus other crime.

Would less incarceration improve matters? That raises a difficult question about the optimal price of an illegal drug. The assumption has always been that society's interest is served by high drug prices, since they serve to discourage initiation and encourage desistance. There has been acknowledgment of the problem created by an inelastic demand but the tension has not been made explicit, with one exception. Moore (1973) argued that society

FIGURE 2

U.S. Drug-Related Incarceration and Retail Heroin and Cocaine Prices



Note: Prices are adjusted for inflation.

wanted drugs to be cheap for addicts and expensive to new users. He suggested that targeting enforcement against sales to new users was a way to accomplish this; dealers would then presumably be willing to offer lower prices to known addicts. That has never been put into practice, though it is possible to imagine undercover officers simulating new rather than experienced customers. However the aging of the cocaine and methamphetamine populations suggests that there are limits to this tactic; there simply aren't many new users of these drugs in contemporary America. One would hope though to aspire to policy recommendations that are less contingent.

One way out is again to note that many drug sellers are frequent users of the drugs they sell. If prison or community supervision can reduce their drug use, it may lead to lower aggregate demand for drug and thus to fewer drug deals. That would permit higher apprehension to generate lower incarceration in the long run. This is the insight of Kleiman's (2009) mandated desistance; as Durlauf and Nagin note, Kleiman presents a whole range of approaches aimed at lowering both prison and crime. There is some evidence, notably Hawken and Kleiman (2009), that close supervision with frequent drug testing followed, most importantly, by immediate graduated sanctions can generate much lower recidivism. Thus it is possible that more aggressive policing of drug markets may, as Durlauf and Nagin seek, generate less incarceration and fewer drug deals, but the mechanism for achieving that is more like specific than general deterrence.

Part III Concluding Comments

The analysis in Part II does not disturb either the findings or policy recommendations that Durlauf and Nagin offer. It does how point to a limited domain of generalization. Enforcement against drug sellers involves price mechanisms that complicate the analysis both directly (whether the number of drug dealers in prison falls) and indirectly (whether there will be more incarceration of drug users as a result of their income generating crime).

This analysis covers enforcement against sellers. What about deterring drug users through arrest? Here the price mechanism works in favor of deterrence. A higher risk of arrest for users increases the “full price” of the drug, which includes both money cost and time and risks of acquisition (Moore, 1973). Thus tougher enforcement will reduce the demand for drugs; there will be a shift down the supply curve, to lower price and lower quantity; fewer drug deals at lower prices and thus lower revenue.

Is this an important insight? Though many inmates of state prison are there for possession offenses, the self-reports of the inmates themselves indicate that most of them have pled to possession charges in order to avoid being convicted of more serious offenses of distribution (Sevigny and Caulkins, 2004) The incarceration of users is not a major tool of drug control; the incarceration of dealers for possession offenses is important but our analysis does not apply there.

Finding ways of reducing both the numbers imprisoned because of their drug selling and the amount of drug distribution is an important policy objective. Deterrence does not seem likely to help in this case because of the nature of the market, and the inelasticity of demand in the drug market.

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Shawn D. Bushway is an Associate Professor in the School of Criminal Justice at the University at Albany. He is a criminologist with a background in public policy, economics, and statistics. Two of his broad areas of interest are desistance from crime and the sentencing process. Dr. Bushway received his Ph.D. from Carnegie Mellon University.

Peter Reuter is Professor in the School of Public Policy and in the Department of Criminology at the University of Maryland. From 1999 to 2004 he was editor of the *Journal of Policy Analysis and Management*. He is Director of the University's Center on the Economics of Crime and Justice Policy and also Senior Economist at RAND. He founded and directed RAND's Drug Policy Research Center from 1989–1993. Since 1985 most of his research has dealt with alternative approaches to controlling drug problems, both in the United States and Western Europe. His books include (with Robert MacCoun) *Drug War Heresies: Learning from Other Places, Times and Vices* (Cambridge University Press, 2001),

(with Edwin Truman) *Chasing Dirty Money: The Fight Against Money Laundering* (Institute for International Economics, 2004) and (with Letizia Paoli and Victoria Greenfield) *The World Heroin Market* (Oxford University Press, 2009). Dr. Reuter is the founding president of the International Society for the Study of Drug Policy, which was created in 2007. He has served on a number of Institute of Medicine and National Research Council Committees and is a Fellow of the American Society of Criminology. Dr. Reuter received his Ph.D. in Economics from Yale.

AFTERWORD

IMPRISONMENT AND CRIME

Al Capone, the Sword of Damocles, and the Police–Corrections Budget Ratio

Afterword to the Special Issue

Lawrence W. Sherman

Cambridge University and University of Maryland

The Durlauf and Nagin (2011, this issue) proposal for less prison and more policing lies within our reach. Its feasibility can be increased by the following three strategies:

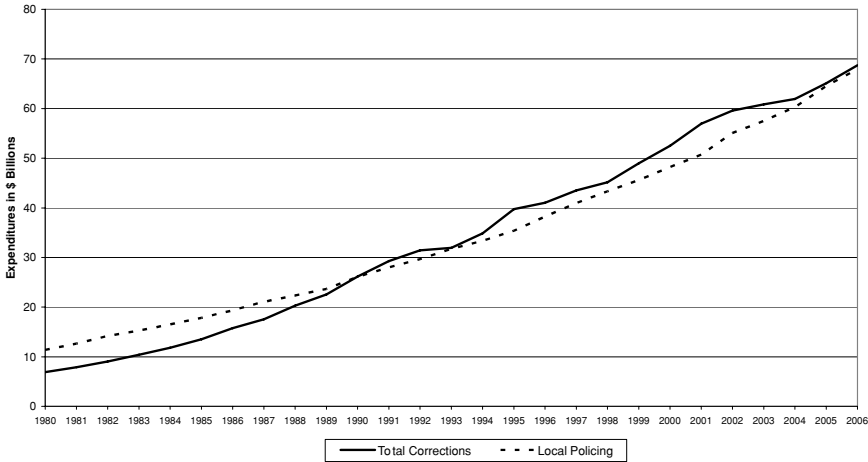
1. A public discussion of the present 1:1 ratio of spending on prisons and policing, unknown throughout U.S. history or in other modern nations.
2. A crime harm index (CHI) forecast at the point of arrest that would increase the number of “Al Capone” prosecutions of dangerous people for provable crimes, no matter how minor.
3. A “Sword of Damocles” approach to offender management for low-CHI forecast offenders who could be diverted from the path to prison at the point of arrest or prosecution.

In general, the academic commentators in this issue present a disappointingly short-sighted response to one of the best ideas criminology has seen in many decades. Other criminologists would be well advised to focus not on the commentators’ cautions but instead on the research agenda suggested by Durlauf and Nagin (2011), as well as on the strategic facts and approaches suggested in the subsequent discussion. Public criminology should not be politically naïve, as many of the commentaries seem to be. If criminologists agree that mass incarceration is a greater harm than malpractice of policing, they must also agree to accept a persuasive alternative as the key political compromise for reducing imprisonment. No other idea on the horizon can match the appeal of more police as the price of less prison (Sherman, 2010).

Direct correspondence to Lawrence W. Sherman (e-mail: ls434@cam.ac.uk).

FIGURE 1

U.S. Total Corrections Expenditures (Federal, State, and Local) and Local Police Protection Expenditures: 1980–2006



The Police–Corrections Ratio

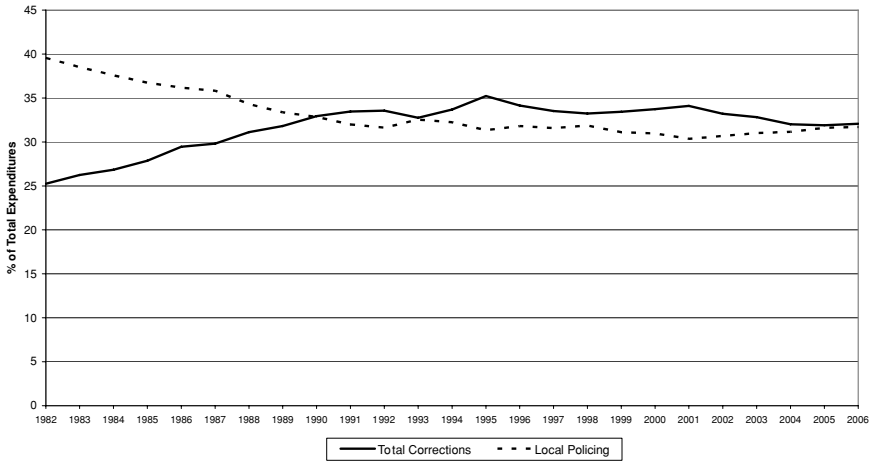
One day in 1990, the tax dollars spent on corrections exceeded spending on local policing for the first time in U.S. history. (See Figure 1, computed from the *Sourcebook of Criminal Justice Statistics*.)¹ This watershed was reached after a decade of rising national investment in local policing, whereas investments in corrections at all levels rose even faster. In 1980, the cost of local, state, and federal corrections—all places that can process offenders caught by local police—was outpaced by 65% more funding going to local policing (Figure 2). But from 1990 to 2006, the criminal justice portfolio consistently had more funding invested in total corrections than in local policing.²

Was the public—or “public criminology,” the kind of criminology that helps the public to understand key choices in crime policy (Loader and Sparks, 2011)—ever aware of American policing taking a back seat to American corrections? I doubt it. Nor did I even know it had happened, until compiling the raw data in early 2010. This trend has survived for two decades without any discussion among criminologists, let alone journalists. It developed below any political radar screen, rather than by a clear democratic choice. How

1. <http://www.albany.edu/sourcebook/pdf/t122006.pdf>.
 2. This fact is not reported in Durlauf and Nagin (2011) because of the misleading inclusion of the national security functions in the federal policing budgets included in the 60% figure they do cite. Federal agencies contribute very few of the inmates in U.S. prisons and jails, with local policing contributing substantial numbers of cases to federal prisons and almost all of the cases in state prisons and local jails.

FIGURE 2

U.S. Total Corrections Expenditures (Federal, State, and Local) and Local Police Protection Expenditures as a Percentage of Total Justice System Expenditures: 1982–2006



else can one account for such a decline in funding for the branch of criminal justice with the highest public confidence ratings (Sherman, 2000)?

The evidence suggests that at all prior times in U.S. history, and in all comparable G20 nations, far more money has been spent on policing than on corrections. Given the correlation between corrections budgets and prison population, the low rate of incarceration in the United States before 1980 (Blumstein, 2011, this issue) suggests that 1982 was typical of most previous periods in U.S. history. And although rising prison populations since then have received substantial press attention, their implications for the relative disinvestment in policing were never spelled out.

In England and Wales in 2010, the estimated budget for local (and some national) policing was £12 billion, whereas the estimated budget for all levels of corrections was £4 billion, a 3:1 ratio (Herbert, 2010); police accounted for 60% of the criminal justice budget, a proportion almost twice as high as the 33% in the recent United States (Figure 2). In the state of South Australia (the capital of which is Adelaide), the police budget of \$668 million is 3.5 times higher than the \$190 million correctional services budget.³ In Japan, the Prefectural (state and local) police budget of 3.4 billion yen is 1.7 times higher than the roughly 2 billion yen cost of the national prison system.⁴ In Hong Kong, the 2010 police

3. Government of South Australia, BUDGET PAPER 4 PORTFOLIO STATEMENTS Volume 2, 2010–11, pp. 5–7.

4. See corrections budget at moj.go.jp/content/000002239.pdf, p. 7; see police budget at npa.go.jp/english/kokusai/9.pdf.

budget of HK\$13 billion is 4.5 times higher than the correctional services budget (including community supervision) of HK \$2.85 million.⁵ I can find no indication of any other nation even approaching parity between the costs of policing and the costs of corrections.

The police–corrections ratio is a separate issue from the very important data supplied by Marie Gottschalk’s policy essay (2011, this issue) about the absolute ratios of police per capita across the U.S. states:

Historical and cross-national evidence appears to buttress claims that more police means less crime, and that the United States is underpoliced. Jurisdictions with the most police officers today tend to have the lowest imprisonment rates and the smallest rates of increase in imprisonment (Stuntz, 2008: 1993). This relationship has held, more or less, since the Gilded Age. In his analysis of cross-regional variations in police per capita, murder rates, and imprisonment, Stuntz found that the South, where police and other government services were historically underfunded, has had a much lower number of police per capita and generally much higher imprisonment levels and murder rates.

Similarly, we can observe that England, Australia, Japan, and Hong Kong, all with much higher police–corrections budget ratios than the United States, also have much lower rates of homicide.

Historically, we know that the “preventive” police were developed in England as a more effective alternative to the most visible punishment: hanging. At a time when Home Secretary Robert Peel abolished the death penalty for more than 100 offense categories (Hurd, 2007), the prison population at that time was tiny, although transportation to Australia was still flourishing. Political opposition to the development and expansion of the police remained intense for decades (see, e.g., Bagehot, 1867), even as hanging dropped sharply. Meanwhile, the homicide rate in England fell steadily (Monkkonen, 2006) as police numbers rose and spread across the countryside. Yet neither comparative nor historical analysis of broad shifts in crime prevention strategy have been visible in our public criminology.

Instead, Michael H. Tonry (2011, this issue) confidently assures us that more police will only cause more racial profiling, with little benefit likely at all. Eric P. Baumer (2011, this issue) assures us that “[a]lthough we do not have good evidence about the effects on certainty of increases in police force size and/or strategic allocations of police forces, presumably, the perception of certainty is already high in these areas”—despite Anderson’s (1999) analysis, which he cites, but not for Anderson’s clear argument that poor Black people in Philadelphia have given up on the police as unlikely to do much to protect them from violence. Baumer’s comment that crime reductions in microplaces may not translate into

5. For 2010 police budget, see budget.gov.hk/2009/eng/pdf/head122.pdf; for 2010 corrections budget, see budget.gov.hk/2010/eng/pdf/head030.pdf.

macrocrime reductions is a useful analytic caution but certainly no reason not to proceed with testing the hypothesis.

John S. Goldkamp (2011, this issue) more readily concedes that targeted policing can have some benefit but then misleads the reader into thinking that the evidence is that such effects have only short-term benefits, not lasting ones. Although Sherman (1990) and Sherman and Rogan (1995) do show early termination of local tactical initiatives, there simply is no evidence in experimental criminology that even tests for effects of increased preventive patrol for longer than a year. Sherman and Weisburd (1995) showed deterrent effects that lasted as long as the experimental dosage lasted in Minneapolis: 9 months. Had the dosage been sustained for 9 years, it may well have sustained the crime-reduction benefits for just as long. Thus, an absence of evidence on long-term police effects is hardly evidence of absence of such effects.

As of this writing, local police are being laid off across the United States, in states facing bankruptcy as a result of prison costs. Absent the elephantine costs of mass incarceration, more state funding might be provided to local education; that, in turn, could provide relief for local taxpayers to maintain the size of their police agencies. These facts complicate the commentators' objections that Durlauf and Nagin (2011) are too narrow in their focus on only the police–corrections trade-off. Anyone who focuses on prison costs necessarily focuses on education, early childhood interventions, health, and welfare. The analytic and political focus on a “criminal justice portfolio” is merely an indicator of how voters may think about issues more clearly, despite the separation of powers between (state-level) spending on prisons and (local-level) spending on police.

The police–corrections budget ratio is an opportunity for state governors and legislators, as well as mayors, district attorneys, and city council members. The opportunity is to do just what Durlauf and Nagin (2011) suggest: Explore ways to trade expensive prisons for effective policing. Taking Baumer's (2011) point that shorter sentences alone may not reduce prison populations, city-level decisions can take the more direct approach of front-end reductions in offenders arrested or prosecuted for imprisonable crime. Although Marc Mauer's (2011, this issue) point about closing entire prisons is the key to saving states money, big city governments can challenge rural communities' needs for jobs with urban communities' need for public safety. More city police might then justify strategies for diverting inmates from state prisons. State governments can incentivize these strategies by promising to split the resulting cost-savings with the cities. Doing this in the form of state subsidies for hiring more local police may well be politically viable, as well as financially sound. The political viability of this opportunity, however, will require at least two more elements to keep voters at ease: Al Capone and the Sword of Damocles.

Al Capone and the Crime Harm Index

The name of Al Capone can be invoked easily in the politics of punishment for an emotionally intelligent argument: Very dangerous people should be put in prison and

kept there, even if they can only be convicted of relatively minor crimes (in volumes high enough for long-term incapacitation). Blamed for the St. Patrick's Day Massacre in Chicago, Capone could not be convicted for those murders. But he did receive a federal 17-year sentence for repeated income tax misdemeanors and felonies.

At a late 2010 meeting with 20 of the most powerful prosecutors in the United States, I invoked the name of Capone to illustrate one half of a front-end strategy for prosecutors to bring down the imprisonment rate. The other half of that strategy would use diversion, or undercharging, to minimize the use of incarceration (within sentencing guidelines) for people who are forecast to cause very little harm in the near future. But the "Capone" half could use advanced nonlinear "data mining" to identify defendants who might be charged with minor crimes, and yet pose major risks of harm (Berk et al., 2009). Not just any recidivism. The criterion can be horrible, extremely harmful crimes, from homicide to crimes against children. They would be the kinds of crimes that, if committed by a defendant who was diverted from maximum prosecution, could cause the end of a prosecutor's political career.

The meeting was an opportunity to explain my National Institute of Justice (NIJ) lecture (Sherman, 2010) on the uses of a CHI. This measure can be calibrated by the median number of days in prison provided by (first offender) sentencing guidelines for each conviction an offender would be forecast to experience in the future, by type of crime. The forecast can be based, as in our earlier work (Berk et al., 2009), on criminal history, age, local crime rate, and other objective, nonprotected characteristics (thus excluding gender, race, religion, and national origin). The CHI also could be used at a mezzo- and macrolevel to track the amount of harm committed by offenders who have been presented to a prosecutor's office, regardless of the decisions they make to prosecute or not. Using illustrations from our probation work in Philadelphia, I showed that the very high overall rate of violent crime in that offender population was highly concentrated among a tiny "power few": The 10% of offenders forecast to be most dangerous were charged with more than 75% of the homicides and attempted homicides, for example.

This suggestion was tied to the idea that prosecutors are first and foremost "crime busters," and not just "criminal busters." The idea of evidence-based prosecution would embrace any strategy that would result in less crime and, possibly, at less cost to the taxpayer. Although this is (for some prosecutors) a new idea that may be disorienting on first hearing, there have already been big-city prosecutors from Brooklyn to San Francisco who recently campaigned (and won) on platforms with similar principles.

The prosecutors cautiously welcomed my suggestion that an advanced forecasting tool could allow prosecutors to identify very dangerous people with more precision than previous forecasting methods. Many in the room, echoing James Q. Wilson's (2011, this issue) reminder not to forget about retribution, were predictably reluctant to give up the retributive (and general deterrent) goals of prison sentences in the case of low-harm offenders. What some found appealing, however, was the use of diversion in high-volume

cases where penalties were already low, and the probability of recidivism was high. What they would want, they said, was to have a viable community supervision plan for anyone who was diverted from prison. What they meant, in effect, was just what Alfred Blumstein (2011), John S. Goldkamp (2011), and Laurie O. Robinson (2011, this issue) discussed in their policy essays. The prosecutors wanted a high capacity for celerity in case a nonimprisoned offender became dangerous. Let us call that capacity a “Sword of Damocles.”

The Sword of Damocles, Celerity, and the Regulatory Pyramid

The Sword of Damocles is an allusion to the ancient tale of a braggart who was ordered by a king to sit under a sharp, heavy sword hanging by a thin thread over the braggart’s head, all throughout a long dinner at the king’s palace. If at any point the braggart should start to brag, the king would nod to a servant who would cut the thread. The sword would then fall and instantly kill the braggart. As the story goes, celerity + severity = no bragging at dinner.

What Durlauf and Nagin (2011) imply is a slightly different, perhaps more enlightened, recommendation: more certainty + more celerity + less severity = more compliance with law. The so-called problem-solving courts for drugs, mental health, guns, and other high-volume offenders have relied, in part, on the celerity of their sanctions to achieve compliance. But they have done so in a way that embraces the graduated sanction severity of the regulatory pyramid described by Ayres and Braithwaite (1992). The “tit-for-tat” responses of mild sanctions for small infractions depends on having a finely graduated scale of escalation in sanction severity, starting with very low severity levels. At the same time, Ayres and Braithwaite argue, there must be a very big stick of severity waiting in the background. Keeping it in the background may increase compliance by minimizing defiance (Sherman, 1993), especially because its presence is well known by both the regulated and the regulators.

The Sword of Damocles is also what the drug court judge in Hawaii wields in Project Hope. But probation officers in other jurisdictions say they cannot replicate these powers. Legal delays and processes make instant consequences for violations almost impossible in those places, at least using court as the venue for regulation. Thus, a key part of the research agenda for the Durlauf and Nagin (2011) proposal needs to be inventions for achieving greater celerity from more responsive agencies (Sherman, 2011).

One model is police-level diversion, of the kind widely tested with great success at reducing repeat offending among juveniles (Petrosino, Turpin-Petrosino, and Guckenburg, 2010). As Peter W. Neyroud (2011, this issue) notes, and will soon test himself, such diversion can be part of what an increased (or even decreased) police budget is spent on. It could include police-led programs like restorative justice (Sherman and Strang, 2007). But it also could include far more active engagement on a daily basis with known offenders of low risk who have been diverted from imprisonment.

The founders of modern police, like Peel, envisioned that police would prevent crime, in part, by managing offenders as well as places. David Weisburd’s (2011, this issue) evidence-based argument for police focusing on places is helpful, but it is not necessary for police to

give up on monitoring offenders as well. In fact, police long ago gave up, in large part, the kind of offender monitoring they had done historically (Steffens, 1931). What could make “less prison, more police” more successful in causing less crime is a more systematic means of police monitoring low-harm offenders in the community. Unlike probation, police are in the streets 24 hours a day. In principle, they are far better suited to monitor the compliance of diverted or noncustodial supervisees than any other institution in criminal justice.

The key point, as William Bratton (2011, this issue) points out, is that an increase in policing does not necessarily require increase in arrest rates; it could even lead to fewer arrests. Durlauf and Nagin (2011) clearly leave that issue up to the results of far more research. Despite some commentators’ skepticism, having more police would create more capacity for regulatory strategies that could include far more alternatives to arrest. The pessimism that police always will impose coercion, or even misuse their powers, is contradicted by impressive strides in police agency management in the past four decades. Police culture certainly has a long way to go to adopting an evidence-based perspective. But policing may well be on a rising curve of obeying the rule of law in the experience of most crime victims and offenders. It also is clearly moving toward a far greater concern with crime outcomes, and not just punishment outputs.

The fact that racial profiling and other police disasters are still reported should not mislead us into thinking that long-term improvement has not happened and cannot happen. There are many reasons that law enforcement agencies make disastrous mistakes (O’Hara, 2005), quite independent of their number of officers—or even their structures of accountability. One reason, indeed, may be not having enough officers for the challenge they face. Less prison and more police would be an opportunity to test a wide range of innovations in management, as well as strategy, to implement evidence-based policing.

Rather than opposing a “police surge” on the grounds that it would do nothing to increase celerity, criminologists should help invent new ways that policing would be all about celerity. No less than certainty, celerity is a variable that can be manipulated independently of severity. The crisis of mass incarceration is all about severity. Breaking our national addiction to severity will probably require ample “methadone” in the form of impressive increases in both certainty and severity. Such positively labeled innovations as “citizenship testing” (by police checking offender compliance with various requirements of avoiding prison) would be another way to accomplish Philip J. Cook’s (2011, this issue) suggestion to limit the opportunities for offending. So would a substantial increase in hot spots policing. Taken together, they might actually form a solution to the police legitimacy crisis Marie Gottschalk (2011) describes in high-crime neighborhoods.

Public Criminology and Emotional Intelligence

This journal, and especially this issue, is a strong example of “public criminology.” It is arguable whether such criminology should entertain all ideas, no matter how implausible they may seem, or should focus only on ideas that are within public comprehension. My

suggestion is that when a window of opportunity is opened wide, it is no time to be offering politically unpalatable recommendations—even for research and development.

As a forum for engaging with the public owners of our “laboratory,” the public sphere is a vital place for developing good ideas. But what makes a good idea? In a new treatise on “the natural history of innovation,” Steven Johnson (2010) argued that good ideas come from several sources, many of which connect several independent ideas to make one big idea work. A key criterion for making innovations successful, he wrote, is what is called “the adjacent possible.” Citing Charles Babbage as the inventor of the core elements of modern computers in what he called an “analytical engine” in the mid-19th century, Johnson observed that the innovation went nowhere because it lacked the “adjacent possible”—the modern electronics that could implement his conceptual framework. The Google search engine, as another example, is based on an old idea that could go nowhere until the Internet created a new universe to search.

In developing new ideas, public criminology must be equally mindful of the adjacent possible. It is little use suggesting things that make political sense to academics but that strike most voters—or at least most politicians—as inconceivable. In any political innovation, from health care to climate change initiatives, the idea of an “adjacent possible” in the political environment is a foremost consideration. Success in one initiative—such as health care—may even create a backlash that will destroy the adjacent possible political space for other initiatives (such as on climate change).

Another way to describe this strategy for public criminology is “emotional intelligence.” Just as Dick Thornburgh (2011, this issue) chides Durlauf and Nagin (2011) for using complex math symbols that the public would not understand, we must all be more emotionally intelligent about how our words and hypotheses are perceived. My references to the “Willie Horton problem” of an unexpected serious crime leading to more imprisonment led to one prosecutor telling me that it bordered on being politically offensive. “Stick to Al Capone,” I was advised. Such feedback can be taken seriously as long as we actually engage with practitioners and the public to gain feedback in the first place.

Many academic criminologists may prefer to avoid such engagement, which is clearly their right to choose. Science should be open to all styles of work. But when we engage in public criminology—as we do in responding to the Durlauf and Nagin (2011) proposals—we must raise our game to the level of skill required to serve the public well.

It is not very skillful for criminologists to say “let’s just reduce prison, but not increase police. Instead, let’s increase education and child care.” Although Elliott Currie (2011, this issue) and other commentators make a strong case for broadening our policy discussions about crime prevention beyond criminal justice, a proposal to reduce imprisonment is not a viable forum for such a discussion. Logically, perhaps, it might be. But empirically, proposals to reduce imprisonment will unleash intense emotions of insecurity that anyone proposing a radical new idea must address. Few people who fear crime will be assured by the promise of a home visitation program, no matter how effective such a program may

be in the long term. If fewer people are to be sent to prisons tomorrow, many voters will need the reassurance of knowing that there also will be more police tomorrow. Perhaps they want to see more police even before the prison population declines—which is exactly what happened in New York City after 1991.

In my ASC Presidential Address (Sherman, 2003), I called on criminology to help make the criminal justice system more emotionally intelligent (Goleman, 1995). The financial crisis has created an unprecedented opportunity for criminology to affect a major policy debate. Now is the time for criminology itself to become more emotionally intelligent.

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Lawrence W. Sherman was elected Wolfson Professor of Criminology of the University of Cambridge and Distinguished University Professor at the University of Maryland's Department of Criminology and Criminal Justice. His research interests are in the fields of crime prevention, evidence-based policy, restorative justice, police practices and experimental criminology.

