U.S. Department of Justice
National Institute of Justice

Research on Sentencing: The Search for Reform

SUMMARY REPORT

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James K. Stewart
Director

SUMMARY REPORT

Research on Sentencing: The Search for Reform

Alfred Blumstein, Jacqueline Cohen, Susan E. Martin, and Michael H. Tonry, *Editors*

Panel on Sentencing Research

Committee on Research on Law Enforcement and the Administration of Justice

Commission on Behavioral and Social Sciences and Education

National Research Council

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The full report of "Research on Sentencing, Volumes I and II" are available from the National Academy Press, 2101 Constitution Avenue, NW, Washington, D.C. 20418, or on interlibrary loan from the National Criminal Justice Reference Service Document Loan Program, Box 6000, Rockville, Maryland 20850.

Foreword

Sentencing is the official pronouncement of the penalty for criminal behavior. It is one of the most routine yet at the same time, among the most dramatic and controversial expressions of society's effort to ensure the public order. The judge passing sentence must take into account not only the harm committed against the individual victim but also the effect of the crime on the internal cohesion and stability of the entire society.

The sentencer must consider fairness, equity, community values, the defendant's culpability and motivation and the actual extent of harm done to the victim. The sentencing decision is both a condemnation for past actions and an assessment of the future direction the defendant will bring to his life.

Until recently this complex decision was based almost entirely on the individual judge's balancing of all these competing factors. The judge had to rely on his own personal values and intuition to determine what would be a just sentence. Not surprisingly, when sentencing patterns among judges and courts were analyzed, there were found to be many inconsistencies within the same state and even within the same court.

Primarily because of increasing public concern about this lack of consistent sentencing policy, with many people believing sentences were too lenient and others finding cases of unwarranted harshness, substantial changes in sentencing have been adopted or attempted in virtually every state during the last decade. Mandatory minimum sentences have been established for some crimes. Elaborate systems have been devised for identifying the presumptive or guideline sentence for every possible combination of crime and criminal history severity.

Many of these attempts to structure sentencing policy have been assessed by the National Institute of Justice or by the states themselves. This report by the National Academy of Sciences is an attempt to synthesize and assess what we have learned from all these efforts. The National Institute asked the Academy to identify for us the current state of knowledge about sentencing practices—what do we know about the determinants of sentencing, its fairness and its effects? What changes have been produced by all the attempts at reform and which approaches to reform have been the most effective?

Although this report is not a definitive guide to a single, best sentencing policy, it is a summary of what we have learned from a wide variety of experiences with sentencing reform. It is intended to inform and assist legislators, commissioners, judges and others who are responsible for setting sentencing policy. It is also intended to assist researchers and interested citizens who hope to advance and improve our knowledge and practice in this complex area.

James K. Stewart
Director
National Institute of Justice

PANEL ON SENTENCING RESEARCH

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Preface to the Full Report

The Panel on Sentencing Research is an outgrowth of the ferment that significantly affected sentencing practice in the 1970s. That ferment is reflected in a variety of sentencing "reforms," many of which had their roots in research, much of which involved technical questions of some complexity.

The Panel on Sentencing Research was established in September 1980 to review that research on sentencing and its impact. The panel was created in response to a request from the National Institute of Justice to the National Academy of Sciences, as a panel of the Committee on Research on Law Enforcement and the Administration of Justice of the Commission on Behavioral and Social Sciences and Education of the National Research Council. The panel's task was to assess the quality of the available research, to indicate how the application of research techniques could be improved, and to suggest directions for future research, especially that supported by the National Institute of Justice. To address this range of issues, the panel was composed of specialists representing a variety of academic disciplines, methodological approaches, and operational expertise in the criminal justice system.

The issue of sentencing is very broad, and so the panel very early had to limit the scope of its work. Much of the public concern over sentencing relates to its effects on crime, but those effects were explicitly excluded from the panel's efforts because two other panels of the Committee on Research on Law Enforcement and the Administration of Justice—the Panel on Research on Rehabilitative Techniques and the Panel on Research

on Deterrent and Incapacitative Effects—had recently reviewed the research in their respective areas and identified directions for future research.

Sentencing also involves many complex philosophical questions relating to the role of punishment in society, to the appropriate form of punishment, and to the symbolic qualities of punishment. The panel inquired into these areas to provide a background perspective for its work, but viewed their resolution to involve predominantly normative, nonempirical considerations, and thus to fall outside the panel's research-related mandate. There are also many important issues surrounding the question of the sentencing of juveniles; however, since most of the recent sentencing research and reform have been directed at the adult criminal justice system, that has been the focus of the panel's attention.

In addressing its task, the panel directed its major attention to those issues on which a reasonable body of research already existed or for which new research held promise of making important new contributions. The panel commissioned several papers to synthesize the research in some areas that were particularly extensive, to explicate important methodological issues that limited the validity of existing research, and to identify particularly promising future research possibilities. These papers were presented at a conference the panel organized at Woods Hole, Massachusetts, on July 27-29, 1981. The discussion of those papers provided an important contribution to the panel's deliberations, and a number of the commissioned papers, revised in response to the panel's suggestions, constitute this volume. These papers, which represent the views of the individual authors rather than the panel, are published because the panel believes they make a valuable contribution to the literature on sentencing research.

The panel would like to express its deep appreciation for the extensive contributions by its staff. Susan Martin of the National Research Council served as study director and, as such, managed the affairs of the panel, and addressed many of the sociological issues involved in the work of the panel. As a consultant, Jacqueline Cohen of Carnegie-Mellon University had a primary responsibility for addressing the analytical issues in the research reviewed, but her skills and commitment resulted in many important contributions throughout the report. Michael Tonry of the University of Maryland School of Law, also as a consultant, contributed valuable perspectives on the many legal and philosophical considerations involved throughout the work of the panel. A final editing of the panel's report and the papers in Volume II was undertaken by Eugenia Grohman and Christine McShane, respectively, of the Commission on Behavioral and Social Sciences and Education, and their editorial skills are much appreciated. Diane Goldman at the National Research Council provided

major administrative and secretarial support throughout the work of the panel, and her dedication was notable. Jane Beltz provided comparable support at Carnegie-Mellon University.

We would also like to express our appreciation to the National Institute of Justice. Robert Burkhart and Cheryl Martorana of the institute attended most of the meetings of the panel and were most helpful in providing advice and information on the institute's program on sentencing research.

ALFRED BLUMSTEIN, *Chair*
Panel on Sentencing Research

Summary

INTRODUCTION

The sentencing decision is the symbolic keystone of the criminal justice system: in it, the conflicts between the goals of equal justice under the law and individualized justice with punishment tailored to the offender are played out, and society's moral principles and highest values—life and liberty—are interpreted and applied. Therefore, it is not surprising that as crime increased and questions about the criminal justice system's fairness and effectiveness grew pressing in the early 1970s, reformers began reexamining the courts and their sentencing practices.

BACKGROUND

The decade of the 1970s was characterized by a variety of efforts to modify sentencing practices, to establish more detailed criteria for sentencing, and to establish new sentencing institutions and procedures. These reforms have included:

- Abolition of plea bargaining
- Plea-bargaining rules and guidelines
- Mandatory minimum sentences
- Statutory determinate sentencing
- Voluntary/descriptive sentencing guidelines
- Presumptive/prescriptive sentencing guidelines

- Sentencing councils
- Requiring judges to provide reasons for sentences
- Parole guidelines
- Abolition of parole
- Adoption or modification of good time procedures
- Appellate review of sentences

Most states have given serious consideration to at least one of these reforms, and many have adopted one or more of them.

The rapid alteration of American sentencing laws and practices during the 1970s followed a fairly long period of relative inactivity on sentencing policy. Indeterminate sentencing systems were in widespread use until the 1970s and had not changed materially for 50 years: plea negotiation was the predominant but little acknowledged mode of disposition of criminal cases; statutes set upper limits on the sentences to be imposed for each offense, but judges rarely invoked those limits and had no other guidance when setting sentences; most sentences were indeterminate; and the decisions of parole boards were immune from review or appeal.

By 1982, however, most jurisdictions had made dramatic changes in their sentencing practices and institutions. Parole release had been abolished for the majority of prisoners in as many as 10 states, and parole guidelines had been established in at least 8 others. Determinate sentencing statutes, under which prisoners could predict their release dates at the time of sentencing assuming good behavior in prison, were in effect in more than 10 states, and mandatory minimum sentence laws were in effect for some offenses in more than 30 states. Several states had adopted statewide sentencing guidelines, and local sentencing guidelines had been established in more than 50 jurisdictions.

This period of rapid change was associated with widespread dissatisfaction with indeterminate sentences, precipitated by six major factors:

1. *Prison uprisings*. The prison uprisings (e.g., at Attica in New York, the Tombs in New York City, and at other prisons in California, Florida, and Indiana) of the late 1960s demonstrated that prisoners were deeply discontented and that "rehabilitation" was little more than rhetoric in many prisons.
2. *Concern about individual rights and the control of discretion*. Utilitarian practices and their effectiveness were questioned by those concerned with individual rights and with arbitrary uses of discretion. Immune from review, judges and parole boards had broad discretion to decide who went to prison and how long they stayed there, and both became the objects of reform proposals.

3. *Demand for accountability*. Throughout the legal system there was a movement for increased accountability in official decision making. Courts began to require public officials to indicate the bases of their decisions and to give the individuals affected by them the opportunity to dispute material allegations and present evidence, and prisons began to be required to publish their disciplinary rules and to give prisoners an opportunity to defend themselves against charges of rule violation.
4. *Disillusionment with rehabilitation*. After dominating thinking in corrections for more than a century, the rehabilitative ideal was challenged on both empirical and ideological grounds. This challenge undermined the credibility of the argument for indeterminate sentences that permitted release of prisoners when they had been rehabilitated.
5. *Disparity and discrimination*. A number of statistical and experimental studies of judicial sentencing suggested that sentencing displayed substantial disparity and racial and class discrimination. Findings of widespread inconsistencies both within and between jurisdictions contributed to a belief that sentencing practices were unfair.
6. *Crime control*. Official rates of reported crime had increased almost steadily since the early 1960s, and political candidates, public officials, and others were repeatedly expressing frustration at the criminal justice system's inability to control crime. Among the targets of public frustration were "lenient" judges and parole boards that were said to release dangerous people into the community without adequate concern for public safety.

These factors, among others, coalesced into a compelling case against indeterminate sentencing. The indeterminate sentencing system that was all but universally supported in the 1950s had few defenders by the late 1970s. A remarkable consensus emerged among left and right, law enforcement officials and prisoners' groups, reformers and bureaucrats that the indeterminate sentencing era was at its end. Rather less clear was what should replace it.

The Sentencing Reform Movement

A substantial number of structural innovations were proposed and adopted in various jurisdictions. Some attempted to provide unambiguous guidance on sentencing in critical cases (e.g., mandatory minimum sentence laws for drug, firearms, and repeated violent offenses). Some attempted to create decision rules for cases involving relatively harsh sentences (e.g., parole guidelines that set standards for prison release decisions—but necessarily left untouched judges' decisions about whom to im-

prison). Still others attempted to set standards for prison sentences (e.g., determinate sentencing laws and presumptive sentencing guidelines), to abolish or regulate plea bargaining, or to eliminate the power of parole boards to set release dates for the majority of prisoners.

Several efforts to alter sentencing systems have resulted in shifting—rather than reducing—discretionary decision making. Maine abolished its parole board but did nothing to give guidance to judges or prosecutors. California's detailed statutory determinate sentencing law shifted power from the parole authority, which was abolished, to the judge and to the prosecutor, whose discretion over decisions about what charges to bring increased in importance. Illinois's new law shifted power over release decisions from the parole board, which was abolished, to prison authorities, who control the large amount of "good time" available.

Changes in sentencing policies have coincided with both substantial increases in rates of reported crime and growing prison populations. The latter has been attributed both to more severe sentences and to demographic trends that have substantially increased the number of people in the age group with the highest imprisonment rates. The resulting prison congestion has forced attention to the connection between sentencing practice and corrections institutions and prompted concern for possible undesirable consequences that may follow if sentencing changes generate more prisoners than prisons can accommodate.

Goals of Sentencing

The variety of reforms reflects in part the heterogeneous goals of punishment. The primary goals of punishment include the utilitarian ones of crime control (the rehabilitation of offenders, the incapacitation of people likely to commit future crimes, and the deterrence of the sentenced offender as well as others from further offenses) and the general retributive one of imposing deserved punishment. These diverse goals can conflict and, depending on their relative priority in any particular case, may present conflicting arguments for choosing a sentence in that case.

A concern for utilitarian goals involves looking forward to the effects of sentences on the offender and on future crimes by the offender or others. Utilitarian sentences are generally justified on the bases of predictions of future crime and rehabilitative potential, and individualized sentencing is accepted, although it can result in different treatments for similar cases. In contrast, concern for retributive or "just deserts" goals involves looking backward to the defendant's personal culpability, to the nature of the criminal act, and perhaps to the harm it caused. Emphasis is on the punishment *deserved* by the offender rather than on the crime-prevention effects of alternative punishments. This emphasis raises concern about the inequity associated with different treatments for similar cases.

The preceding characterization oversimplifies. Legislatures in establishing penal codes, judges in deciding cases, and parole boards in setting release dates are rarely purely utilitarian or purely retributive, and there are numerous forms of utilitarianism and retribution. Decision makers are influenced by mixtures of personal values and opinions that, like the purposes of punishment, often conflict. The shift away from a wide acceptance of rehabilitation as a goal of punishment has been replaced by an environment in which there is much more disagreement over the goals of sentencing and over which goals are appropriate in individual cases.

Scope of the Study

Sentencing reforms have invoked social science research in several ways. In a number of sentencing guidelines projects, the design of new sentencing standards depended upon research results, notably the statistical analyses of prior sentencing practice. Social science research has also been used in assessing the impact of various sentencing reforms. In at least one reform, the formulation of the Minnesota sentencing guidelines, design and impact issues have been directly linked: estimates of effects on prison populations were used explicitly in designing the new sentencing standards.

The Panel on Sentencing Research was convened to review this growing body of research, to assess the quality of the research and the validity of the approaches used, and to suggest substantive and methodological priorities for future research on sentencing.

The panel adopted a broad view of "sentencing." In ordinary usage the term refers narrowly to decisions by judges. However, to restrict attention only to what judges do would fail to acknowledge other processes and participants that influence whether convicted offenders go to prison and how long they stay there. Witnesses and victims do or do not cooperate with authorities. Police officers decide whether to arrest and book, and for what offense. Prosecutors decide whether to prosecute and for what charge and often negotiate with the defense counsels about charge dismissals and sentencing concessions in exchange for guilty pleas. In some cases a judge or a jury determines guilt; more often a judge accepts a guilty plea. After conviction the judge announces the sentence. Prison officials decide whether an individual prisoner will be awarded

"good time," and parole boards decide when and under what conditions an individual will be released and when parole status will be revoked. Most of these actors operate independently from the others, sometimes within the guidelines and policies of separate organizations, sometimes influenced and constrained by laws. Consideration of "sentencing" thus requires consideration of more than the decisions of judges. The panel's focus is on decision making in the court—including plea bargaining as well as the sentences imposed by judges—and on decisions by corrections and parole authorities.

The conflicting goals of the sentencing process involve moral and philosophical issues that far exceed the panel's mandate or competence to resolve. We have attempted, however, to be sensitive to these issues and to suggest how different philosophical premises might differentially affect the formulation of sentencing policy, yield different sentencing structures, and imply different sentences in individual cases.

In this report we focus primarily on statistical studies of sentencing that have used quantitative data on case attributes and decision-process variables. Much research on criminal sentencing has used other research strategies. Among the most common have been observation of the behavior of criminal court participants and interviews with them. Such research is particularly useful in identifying variations in case processing across jurisdictions and in suggesting the key determinants and processes leading to sentence outcomes. Another body of research investigates sentencing and its impact through use of experimental simulations. The careful controls possible in experimental research provide the opportunity for isolating subtle effects. They also facilitate disentangling the effects of variables that are often interrelated in natural settings.

Our emphasis on statistical studies is due to the large number of studies that use these methods and the technical questions they raise. However, this ought not be taken to imply that this approach is the only one of value. Indeed, we believe that statistical analysis of quantitative data about sentencing should be but one part of an overall research strategy that also includes experiments, interviews, and observation.

The need to limit the scope of the panel's review led us to exclude from intensive examination some subjects that a broad conception of sentencing might properly encompass. We focus on adult courts, and we do not examine research or policy initiatives concerning the sentencing of juveniles. And we do not consider the fiscal costs of implementing various sentencing policies. Perhaps the most salient exclusion is that we do not address the crime control effects of sentences; these involve rehabilitation programs and their effects and the deterrent and incapacitative effects of sentences. These subjects have recently been

reviewed by other panels of the Committee on Research on Law Enforcement and the Administration of Justice of the National Research Council.

In this report the panel focuses on research in four areas:

- The determinants of sentencing, particularly those associated with discrimination and disparity, and the methodological problems that plague this research.
- The various methods used to structure sentencing decisions, especially sentencing guidelines, and the role and validity of such methods.
- The effects on sentencing outcomes and system operations of attempts to structure the sentencing process and sentencing decisions.
- The connections between sentencing policy and the corrections system, particularly prison populations.

We review the principal research findings in each area, comment on major methodological problems and their implications for the validity of those findings, and offer proposals for improving the quality of the findings and for answering questions that have not yet been adequately addressed. The recommendations for future research are necessarily limited by the nature of the sentencing process. Future research, like existing research, must operate within a complex environment of organizational, legal, and political constraints. We do not attempt to offer policy recommendations; rather, we have sought to illuminate the uses and limits of research in shaping sentencing policy. With that information those responsible for establishing sentencing policy should be in a better position to make more informed policy choices.

DETERMINANTS OF SENTENCES

The volume and complexity of research into the determinants of judicial sentences increased enormously in the 1960s and 1970s. Underlying much of this research has been a fundamental concern with accounting for the diversity of sentence outcomes observed in courts in order to answer the important questions about the presence and extent of disparity and discrimination in sentencing. That concern has led to attempts to identify the variety of variables, and the interrelationships among those variables, that combine to influence observed sentence outcomes. To date, however, the general state of knowledge about the factors influencing sentence outcomes still remains largely fragmented. Indeed, research on sentencing derives from a variety of different theoretical and disciplinary perspectives.

Introduction: Discrimination and Disparity

Motivated by charges that sentencing is unfair, much sentencing research has investigated the extent of unwarranted variation in sentences, particularly the validity of claims of widespread discrimination against minority and poor defendants and of wholesale disparities in sentences. While widely used, "discrimination" and "disparity" are rarely defined consistently. For the purposes of this report, they are distinguished in terms of the *legitimacy* of the criteria for determining sentences and the *consistency* with which those criteria are applied to similar cases.

Discrimination exists when some case attribute that is objectionable—typically on moral or legal grounds—can be shown to be associated with sentence outcomes after all other relevant variables are adequately controlled.[1] Such an association may be regarded as presumptive evidence of the existence and extent of deliberate discrimination. Race is the clearest example of an illegitimate criterion; it is a "suspect classification" from a legal perspective and is widely viewed as inappropriate on moral grounds. The range of potentially illegitimate variables is viewed broadly here and may include case-processing variables, like bail status or type of attorney, in addition to the personal attributes, like race, sex, and class, that are conventionally cited as bases of discrimination.

Disparity exists when "like cases" with respect to case attributes—regardless of their legitimacy—are sentenced differently. For example, this might occur when different judges place different weights on the various case attributes or use different attributes altogether in their sentencing decisions. Disparity refers to the influence in sentence outcomes of factors in the decision-making process. The most commonly cited examples include disparity across judges within the same jurisdiction or across entire jurisdictions.

By these definitions discrimination and disparity are distinct behaviors (see Table S–1). If all decision makers behaved similarly and used race or bail status in the same way as a factor in sentences, it would be possible (even if unlikely) to have discrimination without disparity. If all decision makers held shared values about legitimate case attributes

[1] As a policy matter, concern with discrimination has been primarily involved with deliberate behavior that is discriminatory in intent. Research on discrimination, however, rests on outcomes; it does not and cannot distinguish purposive discriminatory behavior from behavior that is discriminatory in effect. As a result, research findings of discrimination refer to findings of discriminatory outcomes that may or may not result from discriminatory intent or be evidence of purposive behavior.

TABLE S–1 Sentence Outcomes Characterized in Terms of Disparity and Discrimination

Legitimacy of Sentencing Criteria	Application of Sentencing Criteria	
	Consistent	Inconsistent
Legitimate	No disparity and no discrimination	Disparity
Illegitimate	Discrimination	Disparity and discrimination

but placed different weights on them, the result would be disparity without discrimination. If some decision makers gave weight to race in their sentencing decisions and some did not (or gave race less weight), sentences would exhibit both disparity and discrimination.

Evaluating the extent of discrimination or of unwarranted disparity requires important normative judgments about how much and what types of variation are unwarranted. Concern with discrimination focuses largely on the invidious role of certain personal attributes of the offender, particularly race and socioeconomic status, and the use of various case-processing variables. Concern for disparity, in contrast, centers on the organizational and structural contexts in which sentencing decisions are made and on the attributes and goals of individual decision makers.

The Range of Variables Considered and Their Explanatory Power

Determination of the nature and extent of disparity and discrimination requires identification of the role, relative importance, and interactions among all the variables that affect sentencing. The variables that have been considered to be determinants of sentences fall broadly into two main classes: variables that characterize the *case* and variables related to the decision-making *process*.

The case variables include attributes of the offense, principally offense seriousness (e.g., crime type(s) charged or convicted and victim harm) and quality of evidence (e.g., number of witnesses and existence of tangible evidence); attributes of the offender (e.g., prior criminal record and demographic attributes such as age and race); and case-processing factors (e.g., charge reductions or dismissals and method of case disposition).

The process variables include structural-context factors (e.g., community attitudes toward crime and statutory or administrative regulations governing sentencing); individual decision-maker factors (e.g., demographic attributes and general political/ideological orientations of judges, probation officers, and others); and procedural variables (e.g., the role of the judge in plea bargaining).

Studies of the determinants of sentences have been characterized by the steady increase in the number and complexity of variables considered as influences on sentence and by growing methodological sophistication in the statistical analyses. The earliest studies often involved simple bivariate contingency tables examining the relationship of a single variable to sentence outcomes (e.g., the number of people sentenced to prison for each race). More recent studies use multivariate techniques that permit simultaneous statistical controls for the variety of factors hypothesized to affect sentences.

> *Despite the number and diversity of factors investigated as determinants of sentences, two-thirds or more of the variance in sentence outcomes remains unexplained.*

The validity of statistical inferences about the determinants of sentences depends crucially on the methodological rigor with which the effects are estimated. Thus, our findings and conclusions are weighed in light of serious methodological shortcomings in the research.

One methodological concern affecting most research on the determinants of sentencing is the treatment of the outcome variable—sentence imposed. A sentencing decision involves a choice among a number of qualitatively different options, including suspended sentences, supervised probation, fines, and incarceration, as well as a choice on the amount of the chosen sentence. Two different approaches have been used to reconcile the different qualitative and quantitative dimensions of sentences. Some researchers focus on the variations in the magnitude of only one sentence type—typically the length of prison terms for incarcerated offenders. Other studies collapse different sentence types into a single arbitrary scale of sentence severity.

Analyses that attempt to estimate the effects of variables on the magnitude of a single sentence type are vulnerable to two forms of error. Focusing on only one sentence type by assigning values of zero to all other sentence outcomes in ordinary least-squares regression results in biased estimates of the effects. Trying to avoid these biases by restricting the analysis to only those cases of a single sentence type (e.g., only those cases sentenced to prison) can introduce selection bias effects.

Correcting for these potential biases requires that the analysis be extended to include the choice among sentence types.

Statistical analyses that use a single, arbitrary scale that combines different sentence types as the outcome variable are particularly vulnerable to serious problems in interpreting findings. The arbitrariness of the scale makes it difficult to assess the magnitude of the impact of determinants on the various sentence types: the impact of a change in a determinant can be interpreted only as an increment in the arbitrary scale units and not in terms of additional years in prison or dollars of fine. Also, since factors can be expected to affect individual sentence types differently, the effects associated with a single arbitrary scale may not be relevant to any of the individual sentence types. A factor like unemployment, for example, might affect the decision to incarcerate but not the length of prison terms. These different effects will both be measured with error when a single scale of sentence outcomes is used in statistical analyses.

These problems pervade much of existing sentencing research, affecting both the comparability of results across different studies and the strength of conclusions drawn from that research. A more desirable approach is to partition the sentence outcome into two related outcomes involving: (1) a choice among different sentence types and (2) a choice on the magnitude of the selected type. Statistical techniques (e.g., PROBIT, LOGIT) are available for analysis of the choice of sentence type; then, taking account of the bound at zero in the analysis of magnitude, these separate aspects of sentence outcome can and should be estimated simultaneously.

The Primary Determinants of Sentences

> *Using a variety of different indicators, offense seriousness and offender's prior record emerge consistently as the key determinants of sentences.*

The more serious the offense and the worse the offender's prior record, the more severe the sentence. The strength of this conclusion persists despite the potentially severe problems of pervasive biases arising from the difficulty of measuring—or even precisely defining—either of these complex variables. This finding is supported by a wide variety of studies using data of varying quality in different jurisdictions and with a diversity of measures of offense seriousness and prior record.

Offense seriousness measures are usually limited to the use of the legally defined offense types or the statutory maximum penalties for

each offense type. Elements of the offense related to offender culpability (e.g., excessive harm to the victim, weapon use, offender/victim relationship and victim provocation, and the offender's role as a principal or accessory) are often not available to researchers using summary court records. The potential elements of "prior record" are generally more visible to the researcher, including items like the number, recency, and seriousness of prior arrests, prior convictions, and prior incarcerations. These record data, however, are often incomplete and may not accurately reflect the data available to the judge. Even when the necessary data elements are available, it is not clear how the variables should be combined to develop measures of offense seriousness or prior record that reflect their effects on sentence outcomes. These factors contribute to measurement error in the offense seriousness and prior record variables.

The bias in the estimated effects of offense seriousness depends on the nature of the error in measuring seriousness. Measurement error that is independent of the level of seriousness yields underestimates (i.e., the estimated effect is in the same direction as the true effect but smaller in magnitude). If, however, the error due to unmeasured elements varies systematically with observed seriousness, the effects of seriousness on sentence outcomes may be underestimated or overestimated.

For example, the existence of a prior relationship between offender and victim or victim provocation are elements of seriousness usually unobserved by researchers that are likely to mitigate offense seriousness. Without observation of these elements, measured seriousness will overstate seriousness as viewed by judges (i.e., measured seriousness is positively related to its measurement error) and underestimate the effect of seriousness on sentence. Other unobserved elements of seriousness, such as injury to a victim, weapon use, or economic loss, by contrast, are likely to increase seriousness above its measured values and so overestimate the true effect of seriousness on sentence outcomes.

Variations in the quality of the data used in the assessment of offense seriousness leave some studies more vulnerable to underestimates and others more vulnerable to overestimates of the effect of offense seriousness. The measurement errors in prior record are likely to result in underestimates of the effect of record on sentences. Despite these biases, offense seriousness and prior record are consistently found to have strong effects on sentences. The consistency of these results under a variety of different biasing conditions increases confidence in the validity of the conclusion that offense seriousness and prior record are the primary determinants of sentence outcomes.

Discrimination by Race

There are two types of evidence often cited in support of the assertion that there is racial discrimination in sentencing. The first is the important fact that blacks are incarcerated in numbers disproportionate to their representation in the population: in 1979, blacks were 10.1 percent of the U.S. adult male population, but they were 48.0 percent of inmates of state prisons. The second appears in studies—there are now more than 70—that attempt to find a statistical association between the race of defendants and the sentences they receive in criminal courts: some of these studies find an association that has been interpreted as evidence of racial discrimination in sentencing.

> *The available research suggests that factors other than racial discrimination in sentencing account for most of the disproportionate representation of blacks in U.S. prisons, although racial discrimination in sentencing may play a more important role in some regions or jurisdictions, for some crime types, or in the decisions of individual participants.*

We must stress, however, that even a small amount of racial discrimination is a very serious matter, both on general normative grounds and because small effects in aggregate can imply unacceptable deprivations for large numbers of people. Thus, even though the effect of race may be small compared with other factors, such differences are still important.

Prison Populations

The overrepresentation of blacks in prison is clear evidence that some interaction of individual behavior patterns and societal response leads to the imposition of severe punishments on one group of people at rates that are disproportionate to their numbers in the population; however, it is *not* by itself evidence of racial discrimination at the sentencing stage in criminal courts.

The disproportionate rate of imprisonment of blacks may be the product of a wide variety of behaviors and processes. One source of the disproportion may be differences in the types and amounts of illegal behavior across the races. These behavioral differences may interact with patterns in the deployment of law enforcement resources and differing rates of apprehension, conviction, and imprisonment for various crime types to affect the racial composition of prisons. Racial discrim-

ination may occur in the arrest process, the charging process, or the sentencing decision; or decisions by parole authorities may result in longer stays in prison for blacks. Some or all of these processes could be at work and could contribute to the disproportionate number of black prison inmates. Only some might involve racial discrimination.

The evidence about differential offense rates across races is scanty, and we cannot say with confidence whether the proportion of blacks arrested is the same as the proportion actually involved in illegal activities. It is possible to investigate, as has been done using victimization studies, the racial identities of offenders as reported by their victims. One set of studies reports a fairly close correspondence between the proportion of robbers and assaulters who are reported by victims to be black and the proportion of persons arrested for robbery and aggravated assault who are black. However, on the basis of available evidence for crimes more generally, we can conclude little about the degree to which blacks are arrested in true proportion to their offense rates by crime.

Focusing only on the *postarrest* phases of the criminal justice system, one approach to assessing the extent of racial discrimination is to examine data on the correspondence between racial proportions at arrest and in prison. In 1979, 35 percent of the adults arrested for index offenses[2] were black. For the crimes most likely to result in prison terms—murder and robbery—53 percent of the adults arrested were black. These data are consistent with the assertion that blacks are overrepresented in prison populations primarily because of their overrepresentation in arrests for more serious crime types, an argument counter to the assertion that overrepresentation results largely from discrimination at postarrest stages of the criminal justice system.

One problem in generalizing from such data is the difficulty in accurately characterizing racial discrimination through global statements about the criminal justice system in the United States as a whole. If and when it occurs in the criminal justice system, discrimination on the basis of race is likely to vary across jurisdictions, regions, crime types, and individual participants. Use of highly aggregated national data could mask racial differences in sentencing at more disaggregated levels. Race may be taken into account in ways that either advantage or disadvantage defendants who are black. We cannot say how much of the similarity in the proportion of blacks arrested and blacks imprisoned reflects racial neutrality and how much of it reflects the net result of offsetting effects

[2] Index offenses are murder, nonnegligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson.

across jurisdictions, regions, crime types, or across the intervening case-processing points between arrest and prison. Aggregate data cannot reveal such differences. The variety of possibilities of offsetting relationships that might be obscured by aggregate data underscores the need for careful, disaggregated research on racial effects for individual crime types at different stages of the criminal justice system and within individual jurisdictions.

Whatever the cause, however, the disproportion of blacks in U.S. prisons is a matter of significant concern. When, on any day in this country, more than 3 percent of all black males in their twenties are in state prisons and another approximately 1.5 percent are in federal prisons and local jails, there is a serious social problem that cannot be ignored. The existence of the disproportion has raised serious questions about the legitimacy of criminal justice institutions; correctly identifying the sources of the disproportionality is crucial to the quest for effective solutions.

The Sentencing Process

The second type of evidence derives from studies of the process of sentencing itself. The studies on race and sentencing are vulnerable in varying degrees to a variety of statistical problems. Many early studies of sentencing—including those of capital punishment—found substantial racial discrimination, with blacks apparently being sentenced more harshly than whites. These studies were seriously flawed by statistical biases in the estimates of discrimination arising from failure to control for prior record, offense seriousness, and other important variables that affect case disposition. To the extent that race is associated with offense seriousness or prior record, with blacks committing more serious offenses or having worse prior records, the variable of race would have picked up some of the effect of the omitted variables and produced overestimates of the discrimination effect.

It is doubtful, however, that the large magnitude of the effect found in these early studies would be completely eliminated by the introduction of appropriate controls. Some portion of the estimated race effect found by these studies may indeed reflect discrimination in sentencing in those areas extensively studied, particularly capital punishment in the South in the 1940s, 1950s, and 1960s.

More recent studies that control for more variables have yielded varied results. Some find evidence of racial discrimination, and others do not. The introduction of controls for offense seriousness and prior record, especially in studies using pre-1969 data, reduces the widespread finding of

racial discrimination in sentencing. Discrimination, nevertheless, continues to be found by more recent studies, particularly in rural courts, for selected crime types, when the victim is white, or only for some judges in a jurisdiction. Even in these contexts, however, offense seriousness and prior record remain the dominant variables in sentence outcomes.

Despite the substantial improvements in addressing the problem of omitted variables, recent studies are still subject to potential biases arising from measurement error and sample selection. Use of incomplete measures of offense seriousness and of prior record bias the effects of these variables on sentences and contaminate the estimated effects of correlated variables like race that are generally measured more accurately. The direction of the bias in a correctly measured variable depends on the bias in the incorrectly measured variable and the nature of the correlation between these variables. When, for example, blacks commit more serious offenses, there are opposite biases in seriousness and race; if the effect of seriousness is underestimated, the discrimination effect is overestimated, and vice versa.

The direction of bias in the estimated race effect arising from measurement errors in offense seriousness and prior record may be affected by sample selection, where the cases ultimately available for sentencing are a selected sample, including only a portion of the population of "similar" offenses originally committed. Aside from challenges to the generalizability of results, sample selection can pose serious threats to the validity of statistical results even within the selected sample. In sentencing research, these internal selection biases can arise when unobserved (and thus unmeasured) factors are common to both the selection and sentence processes, thereby inducing (or altering) correlations in the selected samples between the unmeasured variables and other included variables like race that are also common to both selection and sentencing. Depending on the nature of the resulting correlation, use of selected samples could result in either overestimates or underestimates of the effect of race on sentencing.

The possibility of nontrivial correlations of race with poorly measured but key variables like offense seriousness and prior record raises the possibility of serious measurement error biases in the estimates of discrimination effects. Further complications are introduced by the possibility that the correlations vary with the selection process and by crime type or jurisdiction. If so, the statistical biases attributable to measurement error may be trivial in some cases but critical in others. The biases may even work in opposite directions in different studies. Measurement error bias, operating either directly or through sample selection, could thus substantially obscure the true incidence of discrimination in sentencing.

Discrimination by Socioeconomic Status

The evidence of discrimination on grounds of social and economic status is uncertain.

The relevant research is characterized by inconsistent findings that are subject not only to the methodological uncertainties that apply to race but also to additional difficulties in measuring social and economic status. Furthermore, there is substantial debate about the legitimacy of reliance on some socioeconomic status (SES) variables in sentencing. Employment and education, for example, may be valuable as predictors of criminal recidivism and thus may be considered by some to be legitimate determinants of sentences. Alternatively, the strong association of these SES variables with race and wealth, which are more unequivocally illegitimate, raises questions about the legitimacy of sentencing that is based in part on variables that are associated with illegitimate variables. Even if the empirical questions regarding the influence of SES variables on sentences were resolved, conclusions about the discriminatory nature of these variables would depend on resolution of the normative dilemmas that they present.

Discrimination by Sex

The evidence on the role of sex in sentencing is only preliminary.

Despite the disproportionately low number of women arrested and imprisoned (in 1979, although women constituted 52 percent of the adult population, they accounted for only 20.5 percent of all adults arrested for index crimes, 8.7 percent of adults arrested for murder and robbery, and 4 percent of adults in state prisons), sex differences in sentencing—and differences in the criminal activity of men and women offenders more generally—have not generated a large volume of research. A review of the limited available research findings suggests that differences by sex of defendant are found in the pretrial release decision and in the sentence decision, especially for less severe sentence outcomes. The strength of the conclusions drawn from the existing body of research, like those on race and socioeconomic status, must be moderated by the potential biases arising from errors in measuring seriousness and prior record and from possible selection effects resulting from the differential filtering of cases to the sentencing stage.

Case-Processing Variables

Three case-processing variables have frequently been cited as potential factors that influence sentence outcomes: mode of disposition (guilty plea, bench trial, or jury trial); pretrial release status (free on bail, released on own recognizance, or detained); and type of attorney (none, court appointed, or privately retained). The evidence varies in quality and in the consistency of findings for each of these factors. The evidence indicating that guilty pleas result in less severe sentences is most convincing. Pretrial detention is commonly found to be associated with more severe sentences, but this result is particularly vulnerable to biased estimates and hence is best viewed cautiously. The evidence on the role of attorney type is mixed and does not support a conclusion that attorney type is independently related to sentence outcome.

> *The strongest and most persistently found effect of case-processing variables is the role of guilty pleas in producing less severe sentences.*

It appears that defendants convicted at trial receive harsher sentences in many jurisdictions than do similarly situated defendants who plead guilty. Such a sentence differential is sometimes thought to be an essential element of the process by which large numbers of defendants are induced to plead guilty. Evidence for this differential comes both from interviews with court participants and from statistical analyses of case records in a large number of jurisdictions. While the statistical evidence on the guilty plea "discount" is subject to possible biases arising from measurement error and sample selection, the existence of independent evidence of a guilty plea discount suggests that these biases are not likely to be large relative to the true effect.

Defendants held in pretrial detention are often found to receive substantially harsher sentences than do defendants who are free while awaiting trial. A variety of factors has been suggested that may disadvantage the detained defendant, including: a reduced ability to wage a successful defense, incentives to plead guilty to avoid lengthy stays in local jails, and a labeling process by which detained defendants are presumed—because they are detained—to be more dangerous or to have committed more serious crimes. It is possible, however, that the apparent relationship between pretrial detention and harsher sentences may be at least partially spurious. The association of pretrial detention with poorly measured variables like offense seriousness or prior record raises the possibility of biases in either direction in the estimated effect of pretrial detention on sentence severity. While there appears to be both empirical

evidence and theoretical reasons to support the view that pretrial detention exercises an independent influence on sentence outcome, further research is needed to establish the existence and magnitude of such a relationship.

The results of research on type of counsel and sentences are mixed and do not support a general conclusion that attorney type is independently related to sentence. Anecdotal evidence suggests that defendants represented by public defenders or appointed counsel receive harsher sentences than do those represented by privately retained counsel. This difference has been attributed to heavier workloads or less criminal court experience for public or appointed attorneys, which contributes to less adequate legal defense and increased pressure to dispose of cases through plea negotiations. The spirit of cooperation and compromise that characterizes court regulars is another factor that might jeopardize the positions of defendants represented by overworked or inexperienced counsel. Relations among judges, prosecutors, and various kinds of defense counsel, however, vary substantially among courts, as do the competence, resources, and credibility of various kinds of counsel. It thus would be surprising if type of counsel had a consistent effect across jurisdictions on sentencing outcomes. Attorney type is also likely to vary with offense type and with the prior criminal record of the defendant. Statistical analyses of the effects of attorney type have generally failed to control adequately for these other determinants of sentences.

Disparity

> *While substantial disparities in sentencing probably exist, the relative magnitude of disparity is not known. Furthermore, both normative disagreements and measurement problems make it difficult to determine how much of the disparity is unwarranted.*

Numerous statistical studies of case records and court observations report substantial variation in the sentences imposed by judges serving in a single court jurisdiction. The validity of the statistical results, however, is often jeopardized by inadequate controls for other important determinants of sentences that distinguish the cases before different judges or before a single judge. Some experimental simulation studies in which subjects "sentence" identical cases also report extensive sentencing variation among judges. The experimental studies face challenges to their validity because of the artificial and often contrived character of the

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experiments and because of the use of limited case information, which leaves considerable room for judicial interpretation and imputation of relevant but missing information.

Nevertheless, in at least one carefully controlled study in which judges made real decisions in identical cases, interjudge variation was extensive. Similarly, although some statistical studies have added as many as 30 explanatory variables on case attributes, about two-thirds of the variation in sentencing within single jurisdictions still remains unexplained.

There is little doubt that substantial unexplained variation in sentences does exist. Some of this variation, however, may only give the appearance of disparity when cases seem alike to an outside observer but differ materially in the case attributes observed by the judge(s). Some of this apparent disparity could probably be reduced if better models of sentencing using richer data sets were developed. Sentence decisions are typically modeled as a simple additive model in which the factors determining sentences are all considered simultaneously and always enter the decision in the same way. Sentence decisions, however, may be hierarchical, following a branching structure in which the weight given some factors depends on the presence or absence of other factors. In a particularly heinous crime, for example, the viciousness of the crime alone may be enough to lead to incarceration. In less vicious crimes, a wide variety of factors, including the defendant's prior criminal record and general community ties, may enter the decision whether to imprison. If better models were used, some of the currently unexplained variation might be reduced. It is difficult to estimate just how much of the apparent disparity in sentences might be accounted for by systematic application of identifiable factors.

The principal normative objections to disparity relate to variations in sentences emanating from inconsistencies among judges and even in the decisions of a single judge over time. Inconsistencies among judges in different jurisdictions may arise from differences in court organization and work load and differences in local community attitudes toward crime and punishment. The variations in sentences within a court are more likely to be associated with differences in individual judicial attitudes and reasoning processes and with alternative resolutions of the basic conflict over the different goals of punishment. Presentence recommendations reflecting the attitudes and sentencing goals of prosecutors or probation officers may also be a factor in differences across and even within judges.

The extent to which this disparity is regarded as unwarranted remains an important policy question that depends on the resolution of important competing values. There is agreement that sentences should result from

the evenhanded application of general sentencing principles, and there is also recognition that there are often legitimate social, cultural, and philosophical differences over what those principles should be, as reflected, for example, in conflicting interpretations of the goals of sentencing. Resolution of this policy issue would benefit from continued efforts to clarify and articulate the principles that currently do and those that ought to underlie sentence decisions.

STRUCTURING SENTENCING DECISIONS

A substantial body of knowledge has accumulated in recent years about the design, implementation, and enforcement of new sentencing practices. These changes include policy innovations variously affecting prosecutors, judges, and parole administrators. Sentencing guidelines are but one of these new practices; because they are the most richly developed methodologically, they are used in this report to illustrate methodological and policy problems that are characteristic of many reforms.

Policy and Technical Choices

The first empirically based sentencing standards, the U.S. Parole Commission's guidelines, were developed in the early 1970s by the Parole Decision Making Project to make explicit the policies of the commission and systematize parole decision making. The successful implementation of the parole guidelines led to a test of the feasibility of developing similar empirically based guidelines for sentencing.

Development of such "descriptive"[3] sentencing guidelines involved several steps: first, data collection on a sample of cases sentenced in the

[3] Terminological confusion in characterizing sentencing guidelines arises because they vary on two important dimensions—their legal authority and the role of empirical research in their conception and development. Depending on their use of empirical data on past sentencing practices and on whether the underlying goal is to codify existing practices or to establish new sentencing policies, guidelines have been characterized as "descriptive" and "prescriptive." Neither of these terms is literally accurate: all guidelines are statements of policy or normative choices and to date most have used empirical data on existing practices in their development.

At the same time, guidelines have either presumptive legal authority—meaning that judges are expected to impose the sentence recommended by the guideline in ordinary cases and provide reasons for sentences that do not adhere to the guidelines—or have only voluntary legal force—thereby creating no defendants' rights to appeal. (Guidelines could theoretically have mandatory legal force, but they were developed to provide a less

court for which the guidelines were being devised; second, a multivariate analysis of these case data and the development of a statistical model of past sentencing practices aimed at identifying the combination of variables that explained the greatest proportion of variation in sentencing outcomes; third, transformation of the model of past practices into sentencing guidelines for application by judges.

> *Statistical models of past judicial sentencing practices are valuable aids, but they are insufficient as the sole bases for formulating sentencing policy.*

The assumptions and methodology underlying such "descriptive" sentencing guidelines have led to a number of challenges. First, there is a debate about the extent to which a model based on aggregate data of past case dispositions represents an "implicit policy" that is collectively shared by the judges in that court. While prior record and offense seriousness have been found to be the primary determinants of sentences for virtually all judges, research also suggests that judges give different weights to these common factors, emphasize different aspects of offense seriousness and prior record, and consider different additional variables in sentencing. In instances in which the sentencing patterns of the judges in a jurisdiction vary widely across judges, a model may provide a statistical average of their sentences, but it does not necessarily represent an "implicit policy" with which any of the judges would agree.

Second, models designed to characterize past sentencing practice must overcome the methodological problems already noted generally for research on the determinants of sentencing: errors arising from omitted variables, measurement and scaling problems, and selection biases. The degree to which any model represents actual court practice depends on the skills of the modeler in incorporating the complexity of the considerations that enter the sentencing decisions. When a model is fully

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rigid alternative to mandatory sentencing laws, as connoted by the term "guideline.")

Given these options, four types of guidelines are possible: descriptive/voluntary, descriptive/presumptive, prescriptive/voluntary, and prescriptive/presumptive. In practice, however, only descriptive/voluntary and prescriptive/presumptive guidelines have been established. The former type is illustrated by those in Denver, Philadelphia, Massachusetts, and New Jersey; the latter by those in Minnesota and Pennsylvania.

When we focus on one particular dimension, largely in abstraction, we refer to guidelines in terms of that dimension (e.g., descriptive guidelines or presumptive guidelines); however, when considering specific examples, it is necessary to keep in mind that both dimensions are actually present.

specified and the variables are completely measured, that model can provide useful information in the development of sentencing policy.

Reasonably representative models of existing sentencing practices are useful in providing information that can serve as a basis for comparing a new standard with traditional patterns, educating policy makers about the general operation of the system, and serving as a data base for projecting the impacts of alternate proposed policies. However, in several instances in the development of "descriptive" sentencing guidelines, the models were fundamentally flawed by the elimination of ethically unacceptable variables, such as race and guilty plea, from the model in an effort to eliminate their effects in the guidelines. The consequence of omitting these variables, particularly when they are correlated with variables that are included in the model, is that the model will be misestimated and the guidelines may inadvertently incorporate effects of the omitted ethically unacceptable variables.

> *Ethical decisions must be made in moving from a model of past practice to guidelines; there is no value-free solution to the estimation problem.*

One cannot simply delete an ethically objectionable variable from the equation being estimated to eliminate its effect. Rather, the model must be formulated and estimated with the objectionable variable included; then, a discrimination-free sentencing guideline could be created by using that fully estimated model with the objectionable variable suppressed. This requires a choice: one must decide how *all* offenders should be treated. For example, to eliminate racial discrimination, if it is found, one must decide whether to adopt the existing standard for sentencing blacks, adopt that used for sentencing whites, or choose a new standard to be applied uniformly to everyone.

Other important policy choices cannot be avoided in translating data on past sentencing practices into sentencing standards; even adoption of "descriptive" sentencing criteria that involve no explicit alterations from the estimated model of past practices entails policy judgments on issues that have traditionally been hidden. Among the necessary decisions are the following:

1. Whether to base new sentences on conviction offenses, thereby tying sentences to the outcomes of counsels' negotiations over charges, or on actual offense behavior as determined at a sentencing hearing.
2. Whether to establish explicit sentence concessions for guilty pleas.
3. Whether to exclude from consideration in new sentencing standards variables that are ethically or normatively suspect: e.g., prior

arrests may explain some variation in sentencing practices independently of other prior record factors, yet punishment for prior alleged conduct not resulting in conviction offends important legal values.

4. Whether to authorize intercourt disparity within the same jurisdiction: e.g., the differences between rural and urban regions within a state might be perpetuated by providing local courts with a sufficiently broad range of sentences to choose from or suppressed by trying to force them all into a more narrow range.

> *Resolving technical questions concerning the design and presentation of new sentencing schedules also necessarily involves important policy decisions.*

The normative aspects of ostensibly technical matters arise from the inherent tension between the aim of making criteria in sentencing standards rich and detailed, thereby providing guidance on subtle sentencing choices, and the aim of making them few in number and uncomplicated to use, thereby diminishing the likely incidence of errors in their application.

The following technical choices entail implicit policy choices.

1. Should new sentence schedules be expressed as a two-axis grid (one representing an offense seriousness scale and the other axis representing an offender scale) on which applicable sentences are easily located (e.g., Minnesota's sentencing guideline grid), or should more complicated approaches be used that require more complex calculations for each sentence (e.g., New Jersey's sentencing guidelines)? The former approach minimizes the likelihood of administrative errors in determining the prescribed sentence; the latter permits specification of more detailed sentencing criteria.

2. Should sentencing standards use different bases or the same bases for decisions concerning the type and the amount of punishment (e.g., distinguishing the decision to imprison from the length of imprisonment)? Research efforts have consistently found that different factors influence consideration of the two choices, but the two-stage approach makes calculating the guideline sentence considerably more complex and thus more vulnerable to error.

3. Should easily calculated, additive point systems be used to categorize offenses and offenders, or should guidelines use more elaborate but less easily calculated scoring systems that take account of particular combinations of variables and reflect contingent patterns of decision making?

4. Should there be one set of generic sentencing criteria for all offenses (e.g., only one sentencing matrix for all offenses as in Minnesota) or should there be more offense-specific criteria based on statutory felony class (as in Denver), generic offense type (as in Arizona, where all burglaries are treated together regardless of felony class), or on some other basis?

All of these illustrative technical matters present choices between simplicity and ease of application but less specific policy guidance, and greater policy differentiation among offenses and offenders but with greater complexity and its associated risk of application errors, loss of credibility among officials, and rejection of the entire scheme.

> *Projections of the likely impact of alternative sentencing criteria are indispensible to formulation of sound sentencing policy.*

Existing methodological and statistical techniques can be used in impact projections to inform policy making.

Development of sentencing standards may be a wholly normative process or include empirically informed efforts. A wholly normative process is one in which policy choices are made without regard to past practices or to their projected impact. Most statutory determinate and mandatory minimum sentence laws have been developed in this way. Empirically informed policies make use of knowledge of past policies, practice, or both and project the impact of new practices. Sound public policy formulation, whether by statute or by administrative regulation, requires the consideration of information about the likely consequences of alternative policy proposals. What might be the impact of a 2-year mandatory minimum sentence for robbery, for example, on court resources and on prison populations and corrections costs? Efforts to answer such questions necessitate attempts to project the anticipated effects of changes from past practices as a vital part of any sentencing policy change.

Developing, Implementing, and Enforcing New Sentencing Policies

> *Sentencing is a complex process involving discretionary decisions by many people. Attempts to promulgate new sentencing policies that have included extensive efforts to gain the understanding and support of the affected individuals and organizations and to anticipate the im-*

pact of changes on their institutional and personal interests appear to have been more successful in gaining legislative approval when needed and to have achieved higher rates of compliance when implemented.

Some empirical research and many anecdotes illustrate the ease with which policy initiatives can be frustrated by officials' manipulation or accommodation. Prosecutors can circumvent plea-bargaining bans and rules by shifting to new forms of bargaining. Lawyers and judges can frustrate parole guidelines by negotiating sentences that will expire before the offender is subject to applicable guidelines. Mandatory sentence laws can be frustrated by prosecutors who fail to charge the predicate offense or by judges who make "findings of fact" that essential elements of the predicate offense have not been proven.

Under sentencing guidelines and statutory determinate sentencing laws with presumptive authority and under mandatory sentencing laws, prosecutors and defense attorneys may be able to circumvent applicable standards through charge bargains. Tactical solutions to counterbalance such circumvention include:

- real offense sentence standards that offset charge bargains by basing sentences on actual offense behavior rather than on the conviction offense;
- charge reduction guidelines and guilty plea discounts that structure adaptive responses by providing approved means to satisfy institutional pressures for circumvention;
- parole guidelines in which release decisions are based on actual offense behavior and that effectively constitute an administrative review of sentences resulting from the exercise of prosecutorial and judicial discretion; and
- various forms of appellate review that provide incentives to appeal sentences that are inconsistent with stated policy.

If new sentencing policies are to be effective, their purposes must be specified clearly and stated in terms that are credible to key participants. Policy formulation must also include consideration of likely patterns of adaptation and manipulation and must include features designed to offset anticipated evasions and, where sentence calculations are required, provide statistical or other data necessary to correctly determine a guideline sentence. In addition, reformers can increase compliance by involving interest groups in the policy development process so that they perceive themselves as having a stake in the successful implementation of the new policy.

Sentencing initiatives that include credible enforcement mechanisms are more likely to attain compliance by affected decision makers.

The credibility of a policy depends in part on its legal authority and on the existence of enforcement mechanisms. Thus far, sentencing policy initiatives have possessed three levels of legal authority. Voluntary sentencing guidelines (like those in Denver) typically have only moral or collegial authority, and the credibility of the policy itself is critical. The only major evaluation of the impact of voluntary sentencing guidelines concluded that they had no discernible impact. Whether this is because they were voluntary, because they were insufficiently promoted, because they were not credible in the eyes of judges, or for some other reason is not known. Presumptive sentencing guidelines (like Minnesota's) or statutory determinate sentences (like California's) have presumptive legal authority; the decision maker may disregard the standards, but must provide reasons for doing so that are subject to review. The monitoring and enforcement system established by the Minnesota Sentencing Guidelines Commission, together with appellate sentence review, appears to have resulted in much higher rates of formal compliance (both in imposing sentences that fall within the guidelines and in providing reasons for deviating from guideline sentences) than those found in jurisdictions with voluntary guidelines. Mandatory sentencing laws have prescriptive legal authority that formally requires a decision maker to make a particular disposition.

Legal authority by itself is not necessarily predictive of substantive compliance with sentencing rules: judges and others can always ignore the guidelines or statute. A rule's legal authority does become meaningful, however, in the presence of credible enforcement mechanisms. Presumptive and mandatory standards, for example, are more likely to be observed if there is a realistic likelihood that a judge's failure to comply will be challenged.

Enforcement mechanisms can be formal or informal. The primary formal enforcement mechanisms are various types of appellate review (e.g., Minnesota), administrative review of sentences (e.g., California), and review of prison sentences by parole boards (e.g., U.S. Parole Commission). The bureaucratic nature of criminal court decision making, however, can present serious practical obstacles to effective formal enforcement of sentencing criteria. A prosecutor, for example, is unlikely to appeal a lenient sentence that resulted from plea negotiations to which he was a party. Informal enforcement mechanisms include such things as maintaining and sustaining case-by-case monitoring and facilitating media attention to sentencing decision making.

The obstacles to credible enforcement of sentencing criteria are formidable, but not insurmountable. Like effective political bridge building on behalf of new guidelines, informal enforcement programs require careful attention by legislatures and agencies attempting to ensure change in sentencing patterns.

ASSESSMENT OF THE EFFECTS OF NEW SENTENCING POLICIES

In assessing the effects of sentencing innovations, one must consider adaptive behavior by personnel in the criminal justice system, changes in patterns of case flow, and their effects on sentence severity and disparity. Our analysis thus concentrates on how innovations have affected the behavior of judges and other key participants and on what happens to defendants.

We have reviewed the results of evaluations of reform efforts directed at eliminating or controlling plea bargaining, structuring judicial sentencing decisions through mandatory or determinate sentence provisions or sentencing guidelines, and eliminating or structuring parole release decisions.

The Results of Reforms

Compliance with procedural requirements of sentencing innovations has been widespread, but such behavioral changes have often represented compliance in form rather than in substance.

Prosecutors have refrained from proscribed forms of plea bargaining, judges have imposed mandated sentences on convicted offenders, and parole boards have released prisoners according to guideline requirements. However, substantial modifications in case-processing procedures, counteracting the stated intent of innovations, have been observed throughout the criminal justice system. These changes typically involve increases in early disposition of cases, such as increased case screening, that may serve to limit application of new laws and rules to increase sentence severity.

The elimination of plea bargaining in Alaska was followed by an increase in the proportion of felony arrest cases screened out, but it did not lead to either a decrease in the proportion of offenders pleading guilty or to a large increase in the number of trials. In Michigan, a mandatory minimum sentencing law for gun offenses was accompanied

by earlier dispositions for moderately serious cases and a rise in the rates of acquittals and dismissals. Under a mandatory sentence law for firearm offenses in Massachusetts, there were increases in early dispositions and acquittals in gun-carrying cases of moderate severity. Another effect of both New York's mandatory sentencing law for drug offenses and the Massachusetts gun law was a dramatic increase in case-processing time and in the number of appeals.

The most sweeping effort to restructure sentencing behavior was the adoption in California of a determinate sentencing law to replace the indeterminate sentences that had prevailed for more than half a century. Immediately after the new law took effect, the rates of early guilty pleas increased, as did the proportion of cases disposed of in the lower courts. There are also indications that prosecutors frequently dropped charged enhancements in the final disposition of a case to avoid appeals and to accelerate guilty pleas.

The extent of compliance with reforms has varied with: (a) the level of organizational or political support for the reform; (b) the existence of statutory or administrative authority supporting the procedural requirement; and (c) the existence of credible monitoring and enforcement mechanisms.

High levels of substantive compliance appear to have been achieved when those charged with carrying out the new policy approved of it and were not seriously inconvenienced by it and when decision makers were subject to credible administrative controls or to formal or informal enforcement mechanisms. For example, high rates of substantive compliance with efforts to control plea bargaining have occurred when prosecutors have established administrative procedures to monitor the behavior of assistant prosecutors and when those assistants have shared organizational goals that they perceive as better served by complying with imposed controls on plea bargaining. Similarly, parole board members and examiners in several jurisdictions appear to have adhered to administratively imposed parole guidelines.

In contrast to prosecutors and parole board members, judges are seldom subject to effective organizational controls. With voluntary guidelines, studies have found no evidence of systematic judicial compliance; with changes directly mandated by statute, as in the cases of mandatory minimum and determinate sentencing laws, studies have found formal (but not necessarily substantive) judicial compliance. However, under Minnesota's presumptive sentencing guidelines, the presence of effective external enforcement mechanisms, in the form of appellate

review of sentences and close monitoring by the Guidelines Commission, has resulted in generally high rates of substantive compliance with guidelines by judges in that state.

> *There have been modest changes in sentencing outcomes, particularly some increases in prison use, in jurisdictions that have adopted sentencing reforms. These increases in sentence severity were typically found in previously marginal prison cases—cases that might or might not have resulted in short prison terms in the past. Less ambiguous cases, including both more serious cases for which prison terms were fairly certain outcomes and less serious cases for which prison terms were relatively rare, have experienced little change in sentencing outcomes.*

Mandatory minimum sentencing laws in Michigan, for example, resulted in little change in the likelihood of incarceration for defendants indicted on felony charges. The severity of prison sentences imposed for each offense category, however, did increase slightly. In New York, the risk of incarceration for the small numbers of drug offense defendants who were convicted increased substantially, but steady declines in the numbers and rates of arrest, indictment, and conviction offset this increase. The terms for those drug offenders sentenced to prison, however, increased markedly.

In California, there is some evidence of increasing representation of less serious cases among prison commitments. A comparison of the proportions of people sent to prison for robbery and burglary indicates a trend toward increased proportions of burglary cases (the less serious of the two offenses) among prison commitments. This increase in the proportion of imprisoned burglars is not accounted for by a shift to more serious types of burglary by offenders, suggesting the emergence of a new, lower threshold of seriousness for imposition of prison sentences. However, the trend has been gradual and predates implementation of the determinate sentencing law and so may not be due entirely to the new law.

Changes in sentencing outcomes resulting from sentencing guidelines present a mixed picture. The voluntary guidelines adopted in Denver and Philadelphia were designed to codify rather than to alter existing policy. Predictably, they were found to have had no significant impact either on the level of prison commitment at sentencing or on the amount of variation among sentences. The presumptive sentencing guidelines in Minnesota were designed explicitly to depart from previous sentencing practices and in particular to increase prison commitments for those who

commit offenses against persons, even if they have limited criminal histories, while decreasing prison commitments for property offenders regardless of their criminal records. On the basis of the commission's preliminary monitoring data, the presumptive guidelines appear to have significantly altered sentencing in Minnesota in the intended directions.

> *The substantial increases in prison populations in jurisdictions that have adopted sentencing reforms continue preexisting trends in sentencing and do not appear to be substantially caused by these sentencing reforms.*

While research evidence is limited, two findings support this conclusion. First, prison population increases have occurred in states that have not systematically altered sentencing laws and practices as well as in those states that have done so. Second, in the one instance in which long-term data on prison populations were examined as part of an evaluation of the impact of sentencing law changes, California's determinate sentencing law appears to have continued a trend that was under way prior to adoption of that law. Thus, sentencing reform efforts, rather than stimulating prison population increases, may themselves reflect a broader shift in public sentiment regarding criminal justice system policies.

The Methodology of Impact Studies

> *While changes in system operations and sentence outcomes have been observed, almost all the impact studies suffer from methodological problems that limit our ability to attribute these changes to the sentencing reforms. Inadequate observation periods mar many of the impact studies.*

The typical design involves only two periods, with observations limited to the 6-month or 1-year periods before and after implementation. Such short observation periods preclude identifying preexisting trends and do not allow sufficient time to realize the full effect of a change. Limited observation periods are especially common in impact studies of plea-bargaining bans and mandatory sentencing laws.

> *The validity of impact studies is seriously jeopardized if they fail to investigate the considerable opportunities for differential filtering of cases before and after the implementation of new rules or procedures. To date, impact studies have been too narrowly focused, examining changes*

only in those parts of the process directly affected by a sentencing reform.

This narrow focus makes it difficult to detect the potentially important influence of a change on earlier processing decisions that determine which cases are available for sentencing and on subsequent decisions that affect actual discharge from a sentence.

The validity of the conclusions of many impact studies is limited because of their failure to control adequately for changes in the mix of cases before and after the change takes effect.

A variety of factors, including measures of the seriousness or harm involved in offenses and the prior record of offenders, affect sentencing outcomes independently of any sentencing reform. The impact studies reviewed in this report involved few controls for case-mix variation beyond statutory crime-type categories.

SENTENCING POLICIES AND PRISON POPULATIONS

Sentencing policies affect the size of prison populations through their influence on the numbers of commitments, the lengths of sentences imposed, and the times actually served. Statutory changes in sentencing policies and changes in sentencing and related processing decisions by judges, prosecutors, and police all affect the number of commitments to prison and the sentence lengths imposed. Actual time served is importantly affected by corrections officials in awarding, revoking, and calculating good-time credits and in granting furloughs and prerelease privileges and by parole authorities in establishing parole release dates and revoking parole.

Changes in sentencing policy may affect prison populations, and, if they result in overcrowding, may undermine realization of the goals of the policy makers. The panel examined the relationship between sentencing policy and prison populations with particular focus on recent increases in prison populations and their possible impact on prison life. The panel explored alternative techniques for projecting future prison populations and considered some possible responses to the problem of prison populations exceeding limited prison capacity.

Prison populations increased steadily in the 1970s, and further increases are projected throughout the 1980s. This growth in prison populations appears to continue preexisting trends and is only marginally related to recent sentencing reforms.

Between the end of 1972 and the end of 1981, the total number of persons confined in state and federal prisons grew from 196,183 to 352,476 for an enormous 9-year increase of 80 percent. This increase far exceeded the growth in the civilian population: the rate of incarceration in state and federal prisons climbed from 95 per 100,000 population in 1972 to 154 per 100,000 in 1981. The increase is associated with demographic shifts as the post-World War II baby boom generation reached the age of highest imprisonment rates and also with a possible trend toward increased punitiveness, reflected symbolically by widespread enactment of mandatory minimum sentencing laws. We note again that increases in prison population are found both in states that have adopted reforms and those that have not.

Prison populations have increased more rapidly than has available prison capacity. Many institutions are crowded, and little immediate relief from population pressures is in sight.

Prison administrators can administratively affect rated prison capacity by changing the standards by which capacity is calculated. But even the addition of 23,000 beds to rated capacity between 1972 and 1977 was far below the increase of 92,528 prison inmates over the same period. As of March 1982, single institutions or the entire corrections systems in 28 states were under court order to reduce overcrowding or eliminate other unconstitutional conditions of confinement; many of these court orders had been in effect for several years. Similar court challenges were pending in 19 other states.

Various projections of future prison populations, despite different assumptions, all anticipate further growth in the number of inmates in state custody throughout the 1980s. Because expansion of facilities appears to be occurring more slowly than the increase of prisoners in many states, population pressures will continue for the next several years.

Studies of the effects of crowding and of determinate sentencing systems on prison life are few and preliminary, suggesting several avenues for further research. Corrections officials suggest that crowding, by increasing stress for both inmates and staff, has deleterious effects on both the management of corrections institutions and on the health and safety of inmates and staff. Studies of the effects of crowding on human behavior under varied circumstances have yielded inconclusive findings; research on the effects of institutional size and prison housing arrange-

ments on physical and mental health and on inmate behavior are still preliminary and are often confounded by the difficulty of separating the effects of crowding from other unpleasant aspects of prison life.

Examinations of the effects of determinate sentencing on the availability of rehabilitation programs, on inmates' participation in them, and on inmate behavior and disciplinary mechanisms suggest less effect than either supporters or detractors of change anticipated. Preliminary findings from California, Oregon, and the federal prison system indicate little change in programs available to inmates, slight decreases in participation in them, and little direct connection between inmate misconduct and sentencing policy.

> *Responsible formulation of sentencing policy requires baseline projections of the size and composition of prison populations with no policy changes, as well as estimates of the impact of various policy options. Analytical techniques for this purpose, although still crude, can be applied to estimate the effects of proposed policy changes, thereby making the value choices explicit.*

Because construction of new prison facilities is slow and costly, projections of the future size and composition of prison populations under current or proposed sentencing policies are desirable in considering whether to build new facilities. Accurate estimation has proven very difficult because of uncertainties in predicting the behavior of the many participants involved in sentencing decisions and in understanding the basic causal links among the decisions that contribute to the determination of prison populations. However, various techniques have been developed to provide estimates of future populations under various assumptions. And these techniques can be used to estimate the effects of particular policy proposals. This approach would provide legislatures and the public with the opportunity to consider explicitly the trade-offs between a desired level of punitiveness and its costs. Such consideration may ensure a balance between the severity of sentencing policies or laws and the availability of prison capacity. Without that balance, prison populations could exceed capacity, leading to unintended adaptive responses and systematic evasion of the policies or laws by judges and prosecutors.

The long-term effects of changes in sentencing policy on prison populations can be estimated through demographic-specific and crime-type-specific flow models and through microsimulation modeling techniques. Disaggregated flow models that treat the criminal justice system as a sequence of stages that process defendants as "units of flow" often

cannot incorporate important behavioral responses to changing input conditions. By projecting prison populations under the assumption of a continuation of current policies, the models can provide a warning that a system would be approaching capacity, highlighting the need for some policy response. In microsimulation models, the basis of projections is a sample of individual simulated offenders, each characterized by relevant case attributes, possibly generated from actual case records. Alternative sentencing policies are then applied to this sample and the expected prison population associated with each policy is estimated. The Minnesota Sentencing Guidelines Commission fruitfully made use of such a model in developing its guidelines. Projection techniques are still in relatively early stages of development and are limited by the uncertainty of behavioral responses within the criminal justice system and by limitations on available data.

Increased prison populations and projections of further population growth have stimulated a search for alternative mechanisms for handling larger numbers of offenders in the face of limited capacity. Three general types of alternative strategies are available: direct regulation of prison population through controls on prisoner intake and release; construction to expand the supply of prison capacity; and reduction of the demand for prison space through use of alternatives to incarceration. The choices among these alternatives can be informed by research findings on the relative cost, impact, and effectiveness of each approach.

> *A continuation of the current rate of prison admissions, in the absence of some new prison population "safety-valve" mechanisms, is likely to result in a dramatic rise in prison populations.*

Mechanisms to control prison populations that are now in use in different jurisdictions include sentencing policies designed to limit prison commitments, parole release, increased early release for good behavior, executive clemency, and emergency powers acts.

There is an ongoing debate about the relationship between prison construction and prison populations. A reactive or population model suggests that the construction of new prison facilities occurs as a direct response to increases in prisoner populations. A capacity model hypothesizes that prison construction is itself a stimulus to prison population growth, so that more prison capacity results in the sentencing of more prisoners to fill that capacity, leading to further construction. A recent and widely cited study tested these alternative models and reported significant support for the capacity model, concluding that additions to rated capacity were filled within 2 years of their opening.

However, a reanalysis of those data shows that the calculations were in error and thus that the reported results are not empirically supported.

During the 1970s a variety of alternatives to incarceration were developed and implemented. They include pretrial diversion, intensified community supervision in lieu of secure 24-hour custody, community corrections acts designed to retain offenders under local supervision, restitution or community service programs, and prerelease programs for incarcerated offenders.

> *Evidence from evaluations of these programs suggests that these alternatives have been used more frequently as a supplement to existing nonincarcerative sanctions for use with offenders who would have remained in the community rather than as an alternative sanction for offenders who would otherwise have been incarcerated.*

Although few studies have adequately measured the extent to which offenders placed in the alternative programs would otherwise have been incarcerated, a large proportion of alternative program participants are minor offenders, including persons convicted of traffic violations who have been given a fine or probation. Prerelease programs for incarcerated offenders have permitted limited numbers of otherwise incarcerated offenders to be assigned to lower security facilities several months prior to parole or conditional release, but prison populations in secure facilities have continued to rise, and high rates of technical violation by those in prerelease programs may have resulted in an increase in the total length of their incarceration.

RESEARCH AGENDA

The issues involved in sentencing reform are such that it is not reasonable to anticipate that research will soon provide the "solution" to any jurisdiction's sentencing problems nor suggest a single "optimum" sentencing policy. Choices among alternate sentencing policies inherently involve value choices and will inevitably reflect political considerations within a jurisdiction. Nevertheless, those choices can be clarified and informed by research that illuminates the nature and bases of current sentencing practice and the potential consequences when changes are introduced.

Sentencing Practice and Behavior

One important role for research, and one that should be pursued by jurisdictions considering changes in their sentencing policies, is careful

exploration of the determinants of sentences. This research should emphasize approaches that will reduce the risk of selection bias that often arises when one examines only cases involving a sentencing decision. The research should begin examining the handling of cases as early as possible in the criminal justice process, and certainly no later than indictment. Research intended to measure racial discrimination should emphasize the treatment of less serious offenses, which offer greater room for discretion and greater opportunity for discrimination. Researchers, in selecting jurisdictions, should examine in detail the various stages between arrest and imprisonment to discern the degree to which discrimination may be introduced at some of these intermediate stages but fail to be detected in the aggregate because of possibly offsetting effects. Research designed to determine the extent of disparity in a jurisdiction should emphasize investigation of the role of frequently neglected variables that affect the decision-making process at various stages in the criminal justice system, particularly those factors related to assessments of offender culpability.

The federal government can assist in this process by supporting the development of improved methods for pursuing such research and by serving as an active repository for completed studies on these issues. A primary function for that repository would be to facilitate interjurisdiction comparisons on a continuing basis, both to improve the methodological quality and technique of such studies and to identify patterns that are consistent across jurisdictions.

Estimating the Effects of Changes in Sentencing Policy

A second primary role of research is to improve the ability of a jurisdiction to anticipate the consequences of a change in sentencing policy. In recent years, there has been some improvement in the ability to estimate those effects on prison populations, and, in view of the current and anticipated crowding in U.S. prisons, improvement in the ability to develop reliable estimates of that effect is very important. As such capability to estimate impact becomes available to legislatures and sentencing commissions, they can reasonably be expected to take those effects into account in establishing their sentencing policies.

Most sentencing policy changes are likely to result in only partial compliance by justice system personnel. It is necessary to understand better the extent, nature, and sources of variation in the responses of practitioners, including the development of estimates of the effects of different forms of legal authority, monitoring practices, and enforcement mechanisms in effecting a policy change.

Natural Experiments to Study the Effects of Sentencing Changes

A third role for research is examination of the impact of changes in sentencing policy and practice. Often valuable research opportunities arise from natural experiments associated with the many changes in sentencing policies, including adoption of determinate sentencing laws, mandatory-minimum laws, sentencing guidelines, the abolition of parole boards, and promulgation of new administrative policies by parole authorities, prosecutors, and corrections officials. Each of these changes represents an opportunity to discern how the various actors involved in the sentencing process react to the change and how the change affects their practices. Such knowledge is valuable in providing feedback both to the jurisdiction making the change and to other jurisdictions considering similar policies. In choosing among the possible research opportunities available for these purposes, one must look to jurisdictions where a change is likely to generate compliance; where adequate "before" data are available that characterize practice prior to the introduction of the change; and where there is—or can be developed with some technical assistance—a valid research design, so that the direct and indirect consequences of the change can be adequately estimated.

We recommend the establishment of a continuing center to identify such targets of opportunity and to aid researchers in the formulation and execution of study designs.

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