PROMIS RESEARCH PROJECT

Publication 14

Plea Bargaining: Who Gains? Who Loses?

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Foreword

Our knowledge of plea bargaining and of other practices in our criminal justice network all too often rests upon a weak statistical foundation. The initiation, development, and spread of PROMIS, a computer-based management information system, has made it possible not only for prosecutors and courts to manage their work but for social scientists to model and analyze the transactions of operating criminal justice agencies in conjunction one with another. Our knowledge of plea bargaining, moreover, has rested substantially upon legal or organizational case studies of infrequent decisions or practices. William Rhodes's study of who gains and who loses in plea bargaining, based upon the PROMIS data for the District of Columbia, fortunately avoids both pitfalls. The main concern of the inquiry is the routine rather than the infrequent practice in plea bargaining, and quantitative techniques are used to analyze the transactions of public prosecutors in an operating system.

The prevailing mode of studying the exercise of discretion in our criminal justice network is to investigate a particular type of decision. There are studies of decisions of arrest by police, of nolle prosequi, filing an information, of striking a bargain by public prosecutors, and of jury trials or judicial sentencing. Illuminating as such studies are of types of discretion, since each particular practice is part and parcel of a network of transactions, theoretical and empirical relationships are best understood when they are examined in conjunction. Rhodes's study documents the importance of studying all of the options open to decision by demonstrating that the study of guilty pleas must be conducted conjointly with an analysis of case dismissals.

The theoretical and statistical power of this volume lies in the explication of models of the plea bargaining process and the use of regression equations to predict what probably would have happened to defendants if an alternative course of action had been taken. The regression equations make it possible, for example, to predict the sentence that a defendant who entered a guilty plea or one whose case was nol prossed would have received if he had been convicted at trial and the probability of conviction for defendants going to trial as a basis for "predicting" the probability of conviction for defendants who in fact entered guilty pleas.

Some years ago I had occasion to observe that whether the system of plea negotiation benefits both defendants and the government, as is commonly assumed, is an open question in the United States. The frequently reported finding, for example, that defendants gain shorter sentences in striking a bargain was questioned on a variety of grounds—that there were important differences between those who strike a bargain and those who do not and that cases that go to

trial can result in the imposition of no penalty while those in which a bargain is negotiated always result in one. This study goes far toward providing a satisfactory theoretical and empirical resolution of the questions raised there about who gains and who loses. But the study also is an important contribution to the resolution of policy issues.

Within the United States, there is considerable variety in the alternative dispositions available for public prosecutors and in the networks within which a prosecution office is embedded. This research investigation of plea bargaining in a criminal justice network may well serve as a model for the elaboration and testing of the effects of such differences in operating systems of discretionary justice. But above all, this study demonstrates that justice is too important for its evaluation to be left solely to the judicial branch.

Albert J. Reiss, Jr.
Yale University
January 1979

Preface

> The system is judged not by the occasional dramatic case, but by its normal, humdrum operations. In order to ascertain how law functions as a daily instrument of the city's life, a quantitative basis for judgment is essential.
>
> *Criminal Justice in Cleveland,*
> Roscoe Pound and Felix Frankfurter, eds.

Pound and Frankfurter's observation of a half century ago is equally applicable today. Having traced by hand what was happening to some 5,000 felony cases in the Cleveland courts, they found evidence that the real workings of the courts were often quite different from the picture that emerged from media coverage of the "occasional dramatic case." The study revealed, for example, that most felony arrests were being dropped without trial, plea, or plea bargain; that a serious problem of habitual, serious offenders was receiving insufficient attention; and that bail and sentencing practices were badly in need of reform.

This series of reports traces what is happening to felony and serious misdemeanor cases in the District of Columbia Superior Court in the 1970s, based on an analysis of computerized data. Although the data base is both larger (over 100,000 cases) and richer (about 170 facts about each case), the analyses reach conclusions strikingly reminiscent of those made by Pound and Frankfurter, and now largely forgotten. We are relearning the lessons of high case mortality, the habitual or career criminal, and bail and sentencing inequities.

The source of the data used in this series of research reports is a computer-based case management information system known as PROMIS (Prosecutor's Management Information System). Because it is an ongoing system, PROMIS provides, on a continuing basis, the kind of quantitative assessment of court operations that heretofore could only be produced on an *ad hoc* research basis.

The area encompassed by the PROMIS data—the area between the police station and the prison—has long been an area of information blackout in the United States. This data void about the prosecution and court arena, which some observers regard as the criminal justice system's nerve center, has meant that courthouse folklore and the atypical, but easy-to-remember, case have formed much of the basis for criminal justice policymaking.

Funded by the Law Enforcement Assistance Administration, the PROMIS Research Project is demonstrating how automated case management information systems serving prosecution and court agencies can be tapped to provide timely information by which criminal justice policymakers can evaluate the impact of

their decisions. The significance of this demonstration is by no means restricted to the District of Columbia. Other jurisdictions can benefit from the types of insights—and the research methodologies employed to obtain them—described in the reports of the PROMIS Research Project.

There are 17 publications in the series, of which this is Number 14. A noteworthy feature of this series is that it is based primarily on data from a prosecution agency. For those accustomed to hearing the criminal justice system described as consisting, like ancient Gaul, of three parts—police, courts, and corrections—the fact that most of the operations of the system can be assessed using data from an agency usually omitted from the system's description may come as a surprise. We are aware of the dangers of drawing certain inferences from such data; we have also come to appreciate their richness for research purposes.

Obviously, research is not a panacea. Much knowledge about crime must await better understanding of social behavior. And research will never provide the final answers to many of the vexing questions about crime. But, as the President's Commission on Law Enforcement and Administration of Justice observed in 1967: ". . . when research cannot, in itself, provide final answers, it can provide data crucial to making informed policy judgments." (*The Challenge of Crime in a Free Society:* 273). Such is the purpose of the PROMIS Research Project.

William A. Hamilton
President
Institute for Law and
Social Research
Washington, D.C.

Acknowledgments

So many individuals and agencies have made valuable contributions to this and other reports of the PROMIS Research Project that full acknowledgment of their assistance is not possible here.

Of critical importance to the success of the overall project has been the farsighted, progressive stance of the United States Attorney's Office for the District of Columbia, in terms of both its willingness to permit INSLAW to submit many of its operations to detailed examination and its active assistance regarding the development, analysis, and dissemination of data. The Office is deserving of great admiration and respect.

We are also indebted to the Superior Court of the District of Columbia, which has been extremely generous in making data available for the project's studies and in helping us assess the meaning of our statistics.

Invaluable assistance was also given by the distinguished members of the project's National and Local Advisory Committees, in reviewing, questioning, and commenting upon our research plans, methodology, and findings. The National Advisory Committee includes Curtis Brostron, William A. Cahalan, William H. Erickson, Edith Flynn, Paul L. Friedman, Phillip H. Ginsberg, Lester C. Goodchild, Don M. Gottfredson, Willie King, Albert J. Reiss, Jr., Leslie T. Wilkins, Marvin E. Wolfgang, and Hans Zeisel. During the period in which this report was being prepared, Robert A. Shuker, then Chief of the United States Attorney's Office, D.C. Superior Court Division, served as the chairman of the Advisory Committee. The Local Advisory Committee members are Bruce D. Beaudin, William Golightly, Harold H. Greene, J. Patrick Hickey, Burtell Jefferson, Earl J. Silbert, and Irving A. Wallach.

The PROMIS Research Project owes its very existence to the funding of the Law Enforcement Assistance Administration (LEAA) of the Department of Justice. We are especially grateful to Cheryl Martorana, Chief of the Courts Division of LEAA's National Institute of Law Enforcement and Criminal Justice for her conscientious project guidance; to Al Ash, LEAA, for his enthusiastic support of the PROMIS system, out of which the data analyzed in this study emanated; to Gerald Caplan, former Director of the National Institute, for his leadership and encouragement; and to Charles R. Work, former Deputy Administrator of LEAA, both for his vision and his ardent support of INSLAW's research program.

For this particular report in the series, the greatest debt is to colleagues and friends at INSLAW. They have provided an environment that is both supportive and rewarding. Special thanks must be given to a number of people who commented on the report and otherwise contributed to its development and prepara-

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Additional appreciation is due to non-INSLAW reviewers, including Leslie T. Wilkins, Judge Harold H. Greene, Al Reiss, Henry F. Greene, and the three anonymous reviewers commissioned by LEAA. I remain, of course, responsible for the final product.

William M. Rhodes

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Introduction

Citizens and public officials frequently share a belief that the criminal courts face a crisis. Some critics question the effectiveness of the judicial process in controlling crime, pointing out that few offenders are arrested, fewer still are convicted, and only a small minority serve prison terms. Other critics question the quality of justice, asserting that concerns for case processing have eroded the adversary nature of the judicial procedure, leaving a bureaucratic determination of guilt and punishment for all but exceptional cases. In addition, many individuals sense that crime control and the quality of justice continue to deteriorate despite reforms that seek to attack the roots of the problems.

Conventional wisdom notwithstanding, it is *not* evident that the quality of justice has deteriorated, nor is it necessarily apparent that (except in some cities) the courts really face a crisis. In fact, beyond the formal requirements of law, little is understood about how criminal courts operate, what they accomplish, and how their operations can and should be modified by public policy. Yet, without understanding what courts accomplish and how those accomplishments can be measured, it is difficult to judge performance as unsatisfactory, acceptable, or exemplary. And unless the dynamics of court operations are understood, we may identify desired changes, but be incapable of implementing remedial policy.

Plea bargaining—the process by which the state grants sentencing and other concessions in exchange for guilty pleas in criminal cases—is frequently paramount in this concern for crime control and justice and reflects the ambivalent public attitude toward the judicial process. Despite the importance of plea bargaining to American jurisprudence, groups and individuals as knowledgeable as the American Bar Association (ABA), the National Advisory Commission on Criminal Justice Standards and Goals, and the Chief Justice of the United States Supreme Court disagree with respect to its pragmatic utility and social desirability. The National Advisory Commission called for the elimination of plea bargaining by 1978. The ABA has taken a more equivocal posture, asking for reform but not elimination. And Chief Justice Burger has informed Congress that "there is increasing knowledge of both the inevitability and the propriety of plea agreements."[1]

Ambivalence toward plea bargaining arises from a general disagreement about what plea bargaining *should* accomplish given prevailing norms of American justice, what plea bargaining actually *does* accomplish given the reality of the judicial process, and how the existing practice *could* be modified (or preserved) through public policy. Research reported in this study addresses these concerns by posing and answering two broad questions. The first question posed is: Who gains and who loses from plea bargaining? Gains and losses are assessed for the prosecuting

attorney, the defendant, and the general public. These costs and benefits are measured in terms of convictions, sentences, recidivism, and future judicial processing. The second question is: Why do plea bargains occur? Explanations are sought in terms of resource constraints, the recognition of mitigating circumstances in individual cases, the ability of the guilty plea process to "sort" cases economically, and the individual proclivities of actors in the criminal justice process. The analysis is essentially empirical, and the attempt to quantify observations and support conclusions statistically contrasts with an important body of existing research that is more qualitative.

No pretense is made that the findings resolve all questions about plea bargaining. For one, this is a study of a single jurisdiction. While many conclusions are expected to transcend the specific court setting, findings pertain primarily to the Superior Court of the District of Columbia. More importantly, the interpretation of statistical results requires theoretical insight. The same "data" may appear in a different light when viewed from a different paradigm. Thus, readers will draw their own conclusions from some of the reported statistics. Additionally, many disagreements about plea bargaining arise from different opinions about the meaning of "justice." Findings that are consistent with one observer's values may conflict with a second observer's values. The result is that unambiguous policy implications do not necessarily follow from the reported findings.

Nevertheless, many court outcomes that hitherto have been recognized as important but left largely unmeasured in the criminal justice literature are quantified. Thus, when considered from a theoretical vantage point and assessed from a normative perspective, the findings appear to have implications for public policy. We now turn to a discussion of the theoretical models that underlie the analysis, and to a discussion of normative perspectives relevant to evaluation of the findings' implications.

THEORETICAL MODELS OF THE CRIMINAL JUSTICE SYSTEM: A MACRO PERSPECTIVE

In an important paper, Malcolm Feeley outlined two organizational models useful to the study of criminal justice.[2] In the first—the rational goal model—the researcher identifies the goals of the criminal justice system and ascertains the sufficiency of formal rules intended to channel the organization's work effort toward meeting those goals. As part of his investigation, the researcher employing this model often contrasts desired outcomes with actual outcomes. When the two differ, he attempts to discover where the formal rules are deficient and, perhaps, recommends rule changes based on his findings.

It would be possible to employ the rational goal model in this examination of plea bargaining. With respect to criminal justice, however, goals are nebulous. For example, doing justice is a goal, but the concept is imprecise. Practically, then, goals are assumed to be met if there is procedural fairness likely to lead to conviction of the guilty and acquittal or, preferably, dismissal of cases against the innocent. Thus, rules of criminal procedure can be examined to determine whether they do, in fact, lead to procedural fairness.

As an illustration, the prosecutor is responsible for convicting the guilty and seeing that the innocent are freed. The prosecutor is also supposed to guarantee that differential treatment is received only for relevant considerations, such as criminal record and mitigating circumstances. Given these goals, it is possible to examine whether rules of discovery, rules pertaining to inducements offered in exchange for guilty pleas, and the like, lead to intended responses. Likewise, as the defendant's advocate, the defense counsel incurs enormous responsibilities to

discover whether his client's arrest and subsequent handling were legitimate, to estimate the probability that he would be found guilty at trial, and to assure that a sentence received in exchange for a guilty plea is appropriate. Thus, it would be reasonable to examine rules intended to assure that the defense counsel actually supplies his client with such services. Finally, as the overseer of the judicial process, the judge determines whether the defendant has been treated fairly, whether his counsel is competent, whether a guilty plea has a basis in fact, and so on. We might examine whether the present law is adequate to assure that this function is not subverted by the relative informality of the plea bargaining process.

The rational goals research track is not taken here, however, for two reasons. First, we need not deny that formal rules are essential to the equitable and efficient processing of criminal cases; formal rules of criminal procedure are comprehensively examined in treatises much more extensive than this study allows.[3] Second, while formal rules provide a basic structure for the operation of justice, there remains significant room for discretionary behavior within this basic structure. In this regard, the sociology, politics, and economics of criminal courts are important in determining "justice," and the present data base (which does not allow a comparison of sites with different legal environments) provides an advantage in analyzing the informal rather than the formal operation of the criminal procedure. Therefore, a study of formal rules is outside our intended purview.

Instead, formal rules are taken as given, and an adaptation of Feeley's second model—the functional systems model—is used to study the guilty plea process. In this alternative approach, attention shifts from formal rules to the study of informal accommodations and exchanges among criminal justice actors. From this perspective, the criminal justice system is viewed as having a set of informal rules that are adopted in addition to the formal rules of criminal procedure. These informal accommodations and expectations arise from interactions between sets of actors who sometimes have competing, sometimes mutual, purposes. Informal organizational goals result and these may be inconsistent with the stated or expected organizational goals, although they need not be. Our task is to show how these informal accommodations shape the end product of criminal justice. It is the intention to learn (1) why the informal policies arise and (2) what consequences they have for processing criminal matters.

With this intention in mind, a simple theoretical model is presented. In this model, the handling of criminal cases is viewed as a "capacity" problem in which the prosecutor, defense attorney, and judge use limited resources to dispose of a large volume of criminal cases. Plea bargaining and case dismissals are seen as primary (but not exclusive) methods by which work loads can be cleared with a minimum of strain on individuals and organizations concerned with the delivery of justice.

Justice Lummus expressed one aspect of this model quite dramatically:

> If all of the defendants should combine to refuse to plead guilty, and should dare to hold out, they could break down the administration of criminal justice in any state in the union. But they dare not hold out, for such as were tried and convicted could hope for no leniency. The prosecutor is like a man armed with a revolver who is cornered by a mob. A concerted rush would overwhelm him, but each individual in the mob fears that he might be one of those shot during the rush. When defendants plead guilty they expect more leniency than when convicted by a jury, and must receive it, or there will be no pleas. The truth is, that a criminal court can operate only by inducing the great mass of actually guilty defendants to plead guilty, paying in leniency the price of the plea.[4]

From this view, resource constraints crucially dictate the routine method of case disposition.

Justice Lummus's observations may be misleading in their exclusive preoccupation with the prosecutor. In reality, all court participants are likely to be under pressure to relieve heavy work loads by reliance on the guilty plea process. Moreover, excessive work loads alone do not necessarily lead to plea bargaining. Many scholars have pointed out that in the court setting, where adversaries continually interact, mutual interests are quickly recognized. These mutual interests foster cooperation and accommodations and frequently culminate in patterned settlements of routine criminal cases. As Blumberg put it in his seminal book on the sociology of criminal courts:

> . . . of more intimate concern to the prosecutor are pressures from those with whom he lives in virtual symbiotic professional relationship in order to maintain his own organizational equilibrium. Thus, although the prosecutor has many powers and prerogatives, and possesses the initiative at virtually all times, he nevertheless depends upon the close, continuing help of the police, judges, lawyers, and other functionaries to attain his ends. And they in turn depend upon him for the identical objectives they desire, namely, as few trials as possible.
>
> Besides the time, energy, and resources that the court organization is reluctant to expend upon trials, as a bureaucracy it is loath to engage in activity whose predictability it is unable to control. . . . Greater faith is placed upon symbiotic relationships and structural expectancies to meet the individual and group needs of the court participants, rather than a working through of legal abstractions such as due process. The deviant or even maverick individual who predicates his official conduct solely on acceptable notions of the process, or normatively established routines, is quickly isolated, neutralized or re-socialized.[5]

There exists not only a legal setting but also an organizational milieu relevant to the processing of criminal matters. Thus, by limited resources, we do not just mean that criminal courts lack manpower and facilities relative to work loads. Beyond manpower and facility constraints, courtroom organizations have a limited capacity for conflict, and like all resources, stable work groups can tolerate only a limited amount of strain. Eisenstein and Jacob summarize this perspective well:

> Pervasive conflict is not only unpleasant; it also makes work more difficult. Cohesion produces a sense of belonging and identification that satisfies human needs. It is maintained in several ways. Courtroom workgroups shun outsiders because of their potential threat to group cohesion. The workgroup possesses a variety of adaptive techniques to minimize the effect of abrasive participants. For instance, the occasional defense attorney who violates routine cooperative norms may be punished by having to wait until the end of the day to argue his motion; he may be given less time than he wishes for a lunch break in the middle of a trial; he may be kept beyond usual court hours for bench conferences. Likewise, unusually adversarial defense or prosecuting attorneys are likely to smooth over their formal conflicts with informal cordiality.
>
> The instrumental expression of internal goals is reducing or controlling uncertainty. The strong incentive to reduce uncertainty forces courtroom members to work together, despite their different orientations toward doing justice.[6]

Thus, resource limitations are social (and political) as well as economic.

The functional systems model points to a general observation about court operations. Trials are disruptive and expensive, both in terms of required monetary resources and in terms of ongoing organizational interests. To reduce the volume of trials, thereby mitigating their pernicious organizational consequences, it is necessary (a) to dispose of routine criminal matters by guilty pleas, (b) to reduce the amount of criminal matter settled in the courts, or both. The former results from agreements between prosecutors and defense attorneys, and sometimes, judges. The latter possibility is regulated by the number of arrests, the number of

individuals charged, and the number dismissed. With the exception of the number of arrests, the number of cases is largely controlled by the prosecutor.

The implications of this model for case processing are diagramed in Figure 1. The figure illustrates a simplified flow of defendants through a hypothetical criminal court. Many potential defendants find that their cases are not charged (a process known as "no papering" in the court of interest here); a significant proportion of cases that are charged are eventually nolled or dismissed by the prosecutor. Those cases that are adjudicated go to trial infrequently.

Now consider Figure 2. In this second figure, the number of defendants going to trial increases relative to the number who enter guilty pleas. If an increase in trials has the expected disruptive effect on the court operation, an adjustment could be made by decreasing the rate at which cases are prosecuted. This adjustment—fewer cases filed and more nolles—is indicated in the diagram.

These figures illustrate the criminal process as a hydraulic system.[7] Pressure at one point (e.g., more trials) causes a reaction at other points (e.g., fewer prosecutions). Of significance here, this hydraulic effect *results in an inverse relationship between the number of trials and the number of convictions*. Conviction by guilty plea is certain; conviction by trial is uncertain. For this reason alone, reliance on trials will reduce the number of convictions.

Figure 1.
The Flow of Defendants Through a Hypothetical Court

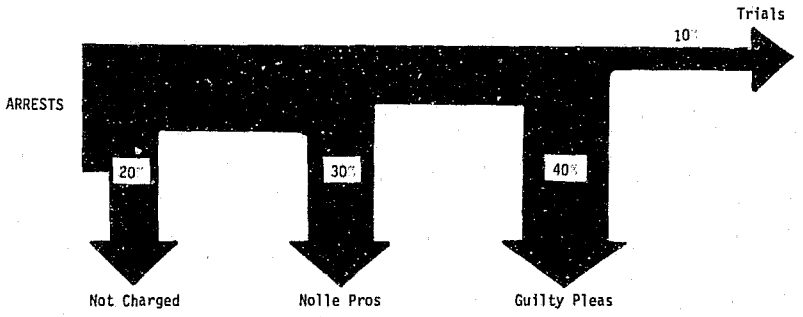
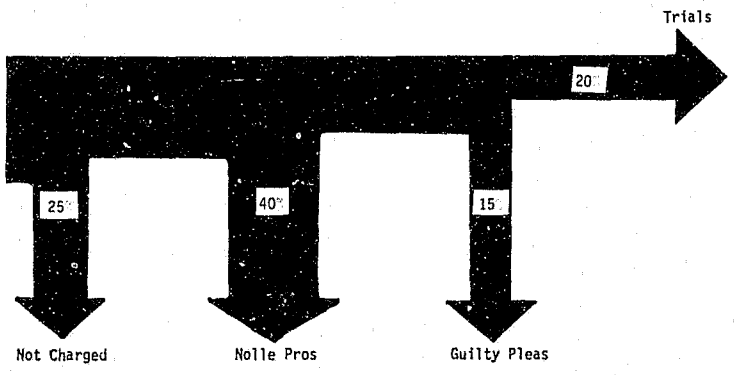


Figure 2.
Relationship Among Pleas, Trials, and Prosecutions



Note: Numbers appearing in these figures represent the percentage of defendants that follow each branch of the criminal justice network. These numbers are hypothetical and are used for illustration only.

But beyond the vagaries of juries and judges, trials may decrease convictions by reducing the number of suspected offenders who are prosecuted and, thereby, have a profound effect on the number of suspected offenders who face jeopardy. This possibility suggests an important research consideration. *A study of guilty pleas must be conducted in conjunction with an analysis of case dismissals.* To the extent that the use of one method of case management is reduced, system demands may require that the other be more heavily utilized.[8] Therefore, a comparison of guilty pleas and trials would be too narrow a focus for a study of plea bargaining.

Although criminal justice researchers have actually adopted numerous different "organizational" models (Feeley's functional systems model is a generic paradigm rather than a specific, well-defined theory), there is considerable empirical support for this general view of court dynamics described above. Qualitative research has been provided by Blumberg, Grosman, Miller, Newman, Cole, Skolnick, Rosett and Cressey, Carter, Neubauer, Eisenstein and Jacob, Levin, and other scholars.[9] Quantitative support can be found in Landes, Posner, Rhodes, and Church.[10] While all these studies elaborate on the causal link between resource constraints and case dispositions (and some scholars even deny the existence of any linkage[11]), there appears to be little doubt that the constraints of law, available resources, and the social setting of criminal courts have an effect at least similar to that described in Figures 1 and 2.

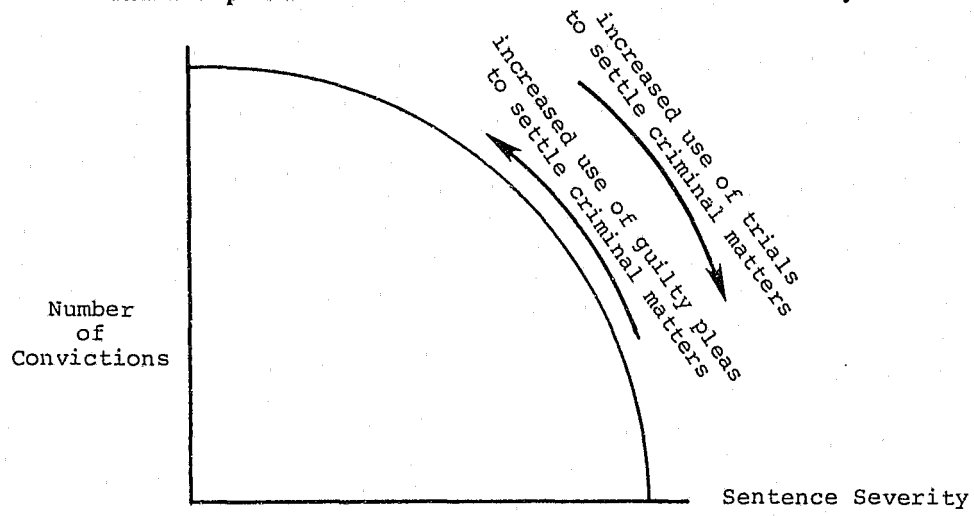
The relationship among resource constraints, organizational milieu, and prosecutions tells only part of the story, however. The number of trials is unlikely to be fixed. Instead, a trial is negotiable, and the probability of its occurrence may decrease with the sentence leniency offered in exchange for a guilty plea. Concentrating on the final "branch" in Figure 2, if the volume of trials is controlled by sentence concessions awarded to defendants pleading guilty, then there must be a relationship between the number of prosecutions and the sentences received in the criminal courts. Of importance here, *there appears to be an inverse relationship between the number of convictions and the severity of sentences received by individuals convicted of criminal offenses.*[12] This inverse relationship is diagramed in Figure 3. The diagram illustrates that as sentence concessions exchanged for guilty pleas are reduced, defendants have a greater incentive to go to trial. If additional trials are disruptive of courtroom work groups, the additional trials may result in fewer prosecutions and, consequently, fewer convictions.

Recognizing this inverse relationship suggests an important question investigated in this study. By assumption, the threat of punishment and the actual imposition of punishment serve the public interest by deterring criminal activity,[13] incapacitating those criminals who are convicted and incarcerated,[14] and initiating the rehabilitation of those persons susceptible to treatment.[15] Ultimately, punishing the guilty reduces future crime.[16] What, then, is the trade-off in terms of future crime between prosecutions (which lead to more convictions) and plea bargaining concessions (which reduce the severity of the criminal sanction)? A partial answer to this question will be offered in this study.[17]

THEORETICAL MODELS OF THE CRIMINAL JUSTICE SYSTEM: A MICRO PERSPECTIVE

Identification of the macro relationship among sentencing, guilty pleas, and prosecution says little about individual guilty plea negotiations. What factors determine the ultimate settlement reached by the prosecutor and defendant?

Figure 3.
Relationship Between the Number of Convictions and Sentence Severity



Neubauer put the matter well:

> The seriousness of the offense, the past record of the defendant, and the legal strength of the case then are primary factors shaping the plea-bargaining process. On the basis of these factors, the prosecutors decide which cases are worth fighting and which ones are not. Just as important is the fact that defense attorneys also accept these same factors. Lawyers negotiate on the basis of what they can reasonably expect to get, not on the basis of what they would like to see. Basically, they think it is reasonable that a person who has committed a more serious offense and/or has a prior history of this type of misconduct should have a higher penalty than other suspects. In short, the defense attorneys work on the basis of the same rank orderings as the prosecutors and, informally, would probably agree that these rank orderings are reasonable.[18]

That is, among other factors taken into account, the prosecutor and defense counsel consider the probability of conviction at trial, the sentence the defendant would receive if convicted at trial (as reflected in the severity of his offense and his past record), and the prosecutor-defense counsel relationship.

Neubauer's perspective is especially enlightening for its emphasis of the possibility that in routine cases the prosecutor and the defense counsel are both likely to believe that the defendant is guilty and has a high probability of conviction if tried. From this perspective, it is a presumption of guilt that "drives" the system. The importance of the judicial process shifts from the question of guilt or innocence to the question of what is an appropriate disposition given the defendant's background and the elements of his offense. Instead of protesting his client's innocence in the face of evidence to the contrary, the defense attorney searches for a settlement that seems correct given the circumstances of the case.

A similar bargaining process has been mathematically modeled in the works of Landes, Noam, Lachman, Rhodes, Posner, Weimer, and Adelstein[19] and receives empirical support from the findings reported in these studies. Qualitative support for the basic model is assessed in Herbert Miller, *et al., Plea Bargaining in the United States*, and is especially notable in the works of Newman, Neubauer, LaGoy, and Mather.[20]

These findings suggest an additional interesting question. It is evident that *the sentence awarded in exchange for a guilty plea is, in part, contingent on what*

would happen at trial. What, then, is the meaning of a "bargain"? Does the negotiated settlement simply discount the eventual punishment to reflect a probability of less than one that a defendant will be convicted at trial? Or does a "bargain" involve something more, or even something less, than this discount implies?[21]

In response, the research question was posed: "Who gains and who loses from plea bargaining?" The intention in answering this question is to determine what happens as a consequence of a guilty plea. The answer has particular importance when coupled with the observation that plea bargain concessions and convictions are directly related, because the "sweeter" the deal offered the defendant, the greater the loss in terms of deterrence, incapacitation, and rehabilitation. The answer is also important, it will be seen, because it allows us to address the issue of whether a plea bargain is likely to lead to conviction of the innocent.

In summary of the theory underlying this analysis, an organizational view of the criminal justice system has been adopted. Most notable from this viewpoint is the assumption that no part of the judicial process can be examined in isolation; rather, a phenomenon such as plea bargaining must be examined in light of the effects that it has on the overall processing of criminal cases. Also notable is the theoretical perspective that plea bargaining cannot be understood from a simple examination of formal court processes. Overall, the theory has caused us to pose two questions. First, who gains and who loses from the plea bargaining process? Second, why do plea bargains occur? Answers to these questions will have policy implications, but before these implications can be discussed, it is necessary to present a normative model of criminal justice, which is introduced in the next section of this chapter.

NORMATIVE MODELS OF THE CRIMINAL JUSTICE PROCESS

Limited space prevents a detailed discussion of legal philosophy,[22] but if policy implications are to be drawn from findings presented here, it is necessary to sketch some prevailing norms of criminal procedure. The discussion begins with an interesting point raised by Lady Barbara Wootton, namely, that the adversary process may not be optimal at discovering "truth" with respect to guilt or innocence.[23] The implication of Wootton's argument is that plea bargaining may lead to a more accurate determination of the crime committed, criminal culpability, and appropriate remedies.

Next, the discussion turns to H. L. A. Hart's reaction to Wootton's (or more generally, the positivist's) position.[24] The force of Hart's argument is that a premium is not necessarily placed on accuracy in the judicial process, but rather, that the preservation of citizen rights is paramount. Closely following Hart's response to the positivists, Herbert Packer described two perspectives: the crime control model and the due process model.[25] These two paradigms are useful in examining policy implications of plea bargaining.

The discussion ends with the perspective offered by the utilitarians, especially as that position is represented in the economics of law.[26] Examining this final position is appropriate because the "economic model" played a major role in the theoretical perspective offered above.

First, we turn to Wootton's argument. In *Crime and the Criminal Law,* Wootton challenged the adequacy of the adversary process in reaching the truth concerning factual guilt in legal questions. Her argument was that neither the prosecutor nor the defense is responsible for seeking the truth. Instead, responsibilities rest with showing either that the defendant is guilty beyond a reasonable doubt (the prosecutor) or that the weight of the evidence is insufficient to demonstrate his guilt (the

defense). Neither side is expected to report an "unbiased" account of the defendant's alleged actions.

Wootton contends that this adversary process could best be replaced by employing scientific investigators and trained persons (rather than a jury of peers) to determine guilt or innocence. This same group would be charged with sentencing, a responsibility they would satisfy according to the best scientific evidence available pertaining to the defendant's potential rehabilitation. Wootton saw such a regime as (a) increasing the accuracy of the determination of guilt and (b) imparting more rationality into the process of sentencing.[27]

While Wootton did not explicitly consider the guilty plea process, the implications of her position are readily apparent. In a courtroom setting, the incentive for both the state and the defense is to present a one-sided picture of the crime committed and the likelihood that the defendant committed that offense. In a plea negotiation, in contrast, there is the opportunity for both sides to present their cases candidly. While bluffing may occur during these negotiations, the available evidence at least is weighed by two trained and experienced professionals. It is reasonable to believe that they would, over time, become adept at determining the appropriate disposition in individual cases. In fact, Miller, *et al.*, present evidence that many prosecutors and defense counsel believe that plea negotiations are more likely than trials to result in an accurate determination of guilt.[28]

As noted, Wootton's position has not gone unchallenged. H. L. A. Hart has argued that the positivist's position ignores the variety of values that are preserved in the criminal justice process. Hart's position has, perhaps, been best articulated by Herbert Packer in *Limits of the Criminal Sanction*. In this book, Packer offered his two models of the criminal process: the crime control model and the due process model. According to Packer, neither model exists in the extreme, but ultimately the criminal justice system finds itself leaning toward one or the other.

The primary value underlying the crime control model is that crime, if uncontrolled, will impose unbearable costs on members of society. Therefore, this perspective supports an efficient criminal justice system. A premium is placed on apprehension and conviction, which must be accomplished quickly and inexpensively, and which require that the adversary nature of the criminal process be minimized. Efficiency is accomplished by effective and early screening of the innocent from the guilty, and this screening responsibility is left largely to experts, especially, the police and the prosecutor. The model relies on a presumption of guilt. That is, the screening is assumed to be effective, so the further the defendant penetrates into the criminal justice process, the more likely he is to be factually guilty, and consequently, the more appropriate a severe sanction. Clearly, this perspective is supportive of the plea bargaining process.

As Packer puts it, if the crime control model describes an assembly line, then the due process model describes an obstacle course. In the due process model, there is no claim that crime control is unimportant, but there is considerable concern with the way that social control is conducted. Efficiency is replaced by barriers intended to control the regularity and fairness of the process.

The due process model questions the ability of administrative fact finding to arrive at the truth. Instead, it substitutes an impartial judge or jury to determine, in an adversary setting, guilt or innocence. This is not an assessment that the adversary setting is likely to be more accurate. Rather, Packer's argument is that the adversary setting preserves the primacy of the individual and protects the concept of limitation on official power. It assures procedural regularity and promotes a sense of fairness. It is evident that plea bargaining is not as consistent with this normative perspective.

Packer writes:

> What assumptions do we make about the sources of authority to shape the real-world operations of the criminal process? Recognizing that our models are only models, what agencies of government have the power to pick and choose between their competing demands? Once again, the limiting features of the American context come into play. Ours is not a system of legislative supremacy. The distinctively American institution of judicial review exercises a limiting and ultimately a shaping influence on the criminal process. Because the Crime Control Model is basically an affirmative model, emphasizing at every turn the existence and exercise of official power, its validating authority is ultimately legislative (although proximately administrative). Because the Due Process Model is basically a negative model, asserting limits on the nature of official power and on the modes of its exercise, its validating authority is judicial and requires an appeal to supra-legislative law, to the law of the Constitution. To the extent that tensions between the two models are resolved by deference to the Due Process Model, the authoritative force at work is the judicial power, working in the distinctively judicial mode of invoking the sanction of nullity. That is at once the strength and the weakness of the Due Process Model: its strength because in our system the appeal to the Consitution provides the last and the overriding word; its weakness because saying no in specific cases is an exercise in futility unless there is a general willingness on the part of the officials who operate the process to apply negative prescriptions across the board.[29]

Thus, tensions exist between the crime control and due process concerns. These tensions are not necessarily predicated on "facts" but correspond to value preferences concerning the appropriate role and limits of state power. As such, the differences are not likely to be resolved by empirical investigations. As Packer indicates, the values underlying the criminal justice process are more likely to lie in some uneasy balance, not to be resolved by objective reflection.

It is likely to be this way with plea bargaining, and the guilty plea process in general. Facts about the process are unlikely to be definitive in recommending elimination or retention of plea bargaining. Due process and crime control positions rest at a balance, however. It is not unreasonable to believe that a demonstration of what plea bargaining accomplishes, and why it occurs, will have some role in determining the weights to be given due process and crime control concerns.

Recent work in the economics of law has argued that the optimal balance mentioned above can be identified by maximizing the difference between the aggregate costs and benefits of different rules of judicial procedure. This "utilitarian" perspective reduces the problem of justice to that of measurement; rules are chosen that maximize, in the aggregate, the public good. Thus if plea bargaining can be shown to reduce the total cost of crime, but infrequently lead to the conviction and punishment of the innocent, then plea bargaining is consistent with optimal public policy, provided the returns from the reduced cost of crime exceed the costs of occasionally convicting the innocent.

This utilitarian perspective is alluring and, indeed, has dominated the economics of law and law enforcement. But is it convincing? The neoutilitarians—Hart and Packer—have recently been joined by the influential philosopher John Rawls[30] to argue that no, the utilitarian perspective fails as a normative prescription because it ignores the primacy of the individual in the calculations. It allows individuals to incur excessive costs (e.g., the innocent who are convicted and punished) for the benefit of the general public. In the end, these legal philosophers assert, the utilitarian logic of maximizing aggregate benefits minus costs is insufficient as a normative criterion.

Where do these arguments lead? Unfortunately, they lead to an unresolved dilemma. There is no agreed normative model to judge the plea bargaining proc-

ess. It will be possible to present quantitative measures of some of the ingredients that would enter into public policy deliberations. But final policy prescriptions will ultimately depend on the normative perspectives taken. When policy suggestions are offered in Chapter 6, they will be offered contingent on the viewpoints expressed here.

OVERVIEW OF THE STUDY

In this introductory chapter, theoretical models, empirical findings by other researchers, and ethical concerns with the guilty plea process have been summarized. Theoretical models were examined to derive expectations of what the plea bargaining process accomplishes. Empirical findings from other studies were mentioned when they lent themselves to the issues examined in this report. A discussion of ethical issues was necessary because the report will eventually make policy recommendations. While positions need not be taken on ethical matters, findings should be examined with "due process," "crime control," and other criminal justice concerns in mind.

In the next chapter, we preview issues to be examined, indicate why this set of issues was selected, and explain how we will go about the analysis. Chapter 2 is the research design for this study.

Chapter 3 is a descriptive chapter. First, it briefly discusses the processing of criminal cases in the District of Columbia Superior Court. This discussion is accompanied by a flow diagram detailing the aggregate number of cases prosecuted, nolled, and so on. Second, in addition to this aggregate flow, we present comparable flows, augmented to include recidivism, for the following individual offenses: assault, robbery, larceny, and burglary. Much of this report concentrates on these four offenses. Third, the plea bargaining process in the District of Columbia is examined. This examination includes a discussion of formal and informal policies followed in the U.S. Attorney's Office.

In the fourth chapter, trial is considered as an alternative to a guilty plea or dismissal. The question is asked: What happens to a case if it goes to trial? The specific concerns are with predicting (a) the probability of conviction, (b) the likelihood of receiving a given type of sentence, and (c) the consequences (in terms of recidivism) of sentences received following trial. By using multivariate analysis and descriptive tables, it is shown that trial outcomes and future criminal behavior depend on measurable attributes of a defendant and his case. Second, findings are used to predict the probability of conviction, the likelihood of a given sentence, and the future recidivism for *any* defendant, irrespective of his actual disposition, if he were to go to trial. Third, with this benchmark in mind, the treatment actually received by a defendant is compared with what he would have received had he gone to trial. Thus, this analysis puts us in the position of being able to contrast trial outcomes with guilty pleas, thereby providing a measure of the gains and losses from plea bargaining. Gains and losses are measured for the prosecutor, the defendant, and the general public.

Relevant aspects of the theoretical models summarized in the first chapter will be recalled in Chapter 5 in order to explain the guilty plea process. The following variables, or sets of variables, are often advanced as explanations of plea bargaining:

- The probability of conviction at trial.
- The sentence that would be received at trial relative to the sentence that would be received in exchange for a guilty plea.
- Whether the guilty plea was a result of an explicit bargain or whether the

guilty plea was entered with an implicit expectation that a sentence reduction would follow.
- Work loads.
- Predilections and idiosyncrasies of individual prosecutors, judges, and defense counsel.
- Mitigating circumstances of individual cases.
- The defendant's pretrial status, especially whether he was detained in jail pending trial.

Building on the work of Chapter 4, testable hypotheses with respect to these explanations are presented. For example, we test whether, and to what extent, the prosecutor increases plea bargaining concessions as his work load increases. And we test whether the prosecutor is more lenient with defendants who have a lower probability of conviction at trial.

The plea bargaining process has important implications for the control of crime and for the quality of justice. In the final chapter, we summarize policy recommendations that follow from the research findings. We also indicate how these findings and recommendations are consistent with different notions of "justice."

Notes

1. Quoted in Herbert S. Miller, *et al., Plea Bargaining in the United States: Phase I Report,* Georgetown University Law Center (Washington, D.C., 1977): iv.

2. Malcolm Feeley, "Two Models of the Criminal Justice System: An Organizational Perspective," *Law and Society Review* 7, no. 3 (1973): 407–26.

3. An excellent and extensive discussion of the formal rules pertaining to plea bargaining can be found in H. S. Miller, *Plea Bargaining in the United States.* For a briefer discussion, see Arthur Rosett and Donald R. Cressey, *Justice by Consent: Plea Bargains in the American Courthouse* (Philadelphia: J.B. Lippincott, 1976): 47–65.

4. Henry T. Lummus, *The Trial Judge* (Mineola, N.Y.: Foundation Press, 1937): 46.

5. Abraham S. Blumberg, *Criminal Justice* (New York: Quadrangle Books, 1967): 46.

6. James Eisenstein and Herbert Jacob, *Felony Justice: An Organizational Analysis of Criminal Courts* (Boston: Little, Brown and Company, 1977): 27.

7. An earlier PROMIS research report documented the "hydraulic" effect of a police case-review section that reviewed cases that the screening prosecutor declined to prosecute. The police caused *more* cases to be reconsidered and eventually filed, but it was also observed that a larger proportion of cases were being nolled following filing. Brian Forst, Judith Lucianovic, and Sarah J. Cox, *What Happens After Arrest? A Court Perspective of Police Operations in the District of Columbia,* PROMIS Research Publication no. 4 (Washington, D.C.: INSLAW, 1977): 78. PROMIS research has also found that, in the District of Columbia, the rate at which judges grant nonfinancial pretrial release is sensitive to available capacity in the D.C. jail. Jeffrey A. Roth and Paul B. Wice, *Pretrial Release and Misconduct in the District of Columbia,* PROMIS Research Publication no. 16 (INSLAW, forthcoming): III–19.

8. As we will make clear, positing a relationship between guilty pleas and dismissals does not mean that cases are dismissed only because, or even primarily because, of work load constraints and organizational functions. Undoubtedly, case dismissals are the appropriate way to dispose of a large number of suspected offenders and are perfectly consistent with the public interest. See Frank W. Miller, *Prosecution: The Decision to Charge a Suspect with a Crime* (Boston: Little, Brown and Company, 1969).

9. Blumberg, *Criminal Justice*; Brian Grosman, *The Prosecutor: An Inquiry into the Exercise of Discretion* (Toronto: University of Toronto Press, 1969); F. W. Miller, *Prosecution: The Decision to Charge a Suspect With a Crime*; Donald S. Newman, *Conviction: The Determination of Guilt or Innocence Without Trial* (Boston: Little, Brown and Com-

pany, 1966); George F. Cole, ed., *Criminal Justice: Law and Politics* (N. Scituate, Mass.: Duxbury Press, 1972); Jerome Skolnick, "Social Control in the Adversary System," *Journal of Conflict Resolution* 11 (1967), reprinted in Cole, ed., *Criminal Justice: Law and Politics*; Rosett and Cressey, *Justice by Consent*; Lief H. Carter, *The Limits of Order* (Lexington, Mass.: Lexington Books, 1974); David W. Neubauer, *Criminal Justice in Middle America* (Morristown, N.J.: General Learning Press, 1974); Eisenstein and Jacob, *Felony Justice*; and Martin E. Levin, *Urban Politics and the Criminal Courts* (Chicago: The University of Chicago Press, 1977).

10. William M. Landes, "An Economic Analysis of the Courts," *The Journal of Law and Economics* 14 (April 1971): 61–107; Richard A. Posner, "The Behavior of Administrative Agencies," *The Journal of Legal Studies* 1, no. 2 (June 1972): 670–83; William M. Rhodes, "Economics of Criminal Courts: A Theoretical and Empirical Investigation," *The Journal of Legal Studies* 5, no. 2 (June 1976): 311–40, and "Sentencing in Hennepin and Ramsey County District Courts," *The Journal of Legal Studies* 6, no. 2 (June 1977): 333–54; Thomas W. Church, Jr., "Plea Bargains, Concessions and the Courts: Analysis of a Quasi-Experiment," *Law and Society Review* 10, no. 3 (Spring 1976): 377–402.

11. Milton Heuman, "A Note on Plea Bargaining and Case Pressures," *Law and Society Review* 9, no. 3 (Spring 1975): 515–28.

12. Empirical support exists for this supposition. In his study of prosecution in New Orleans, Herbert Jacob explained processing disparity by the different political backgrounds of two district attorneys. Dowling, an economic liberal appealing to lower class voters, processed a relatively low volume of criminal cases but extracted severe sentences. His predecessor, a reform candidate, processed a larger volume of criminal matters, but sentencing was more lenient during his tenure. Herbert Jacob, "Politics and Criminal Prosecution in New Orleans," reprinted in Cole, ed., *Criminal Justice: Law and Politics*: 156–57. Rhodes reported a strong correlation between case filings and prosecutor and defense resources, and a strong relationship between sentences and the demand for trials, for federal courts. Rhodes, "Economics of Criminal Courts." He found similar results in a comparison of two state courts. "Sentencing in Hennepin and Ramsey County District Courts." Stevens H. Clarke and Gary G. Koch, "The Effect of the Prohibition of Plea Bargaining on the Disposition of Felony Cases in Alaska Criminal Courts: A Statistical Analysis," The Alaska Judicial Council (September 1978, preliminary draft) report: (1) that sentence bargaining had been largely eliminated as a result of the Attorney General's prohibition of the practice, with the result that for selected offense categories (2) trials increased significantly (3) screening of criminal cases was intensified, and (4) sentence severity increased. See also *The Nation's Toughest Drug Laws: Evaluating the New York Experience* (The Association of the Bar of the City of New York, Drug Abuse Council, Inc., 1977).

The model does have its critics, see: Peter Nardulli and Kathleen Proch, "The Case Load Controversy and the Study of Criminal Courts," paper presented at the Second National Meeting of the Law and Society Association, Minneapolis, May 18–20, 1978; and Heuman, "A Note on Plea Bargaining and Case Pressure." However, the Nardulli and Proch study was limited to short-run adjustments to fluctuations in work load, and the Heuman study did not control for resources available for prosecution, defense, and judicial activity.

13. Literature on deterrence is voluminous. See: Franklin E. Zimring and Gordon Hawkins, *Deterrence: The Legal Threat in Crime Control* (Chicago: University of Chicago Press, 1973); Gordon Tullock, "Does Punishment Deter Crime?" *The Public Interest* no. 36 (Summer 1974): 103–11; Jack P. Gibbs, *Crime, Punishment and Deterrence* (New York: Elsevier Scientific Publishing Company, 1975); Alfred Blumstein, Jacqueline Cohen, and Daniel Nagin, eds., *Deterrence and Incapacitation: Estimating the Effect of Criminal Sanctions on Crime Rates* (Washington, D.C.: National Academy of Sciences, 1978).

14. C.f., David Greenberg, "The Incapacitative Effect of Imprisonment: Some Estimates," *Law and Society Review* 9, no. 4 (1975); and Reuel Shinnar and Shlomo Shinnar, "The Effect of the Criminal Justice System on the Control of Crime: A Quantitative Approach," same issue. Stephen van Dine, Simon Dinitz, and John Conrad: "The Incapacitation of the Dangerous Offender," *Journal of Research in Crime and Delinquency* 14, no. 1; Jacob Belkin, Alfred Blumstein, and William Glass, "Recidivism as a Feedback

Process: An Analytical Model and Empirical Validation," *Journal of Criminal Justice* 1 (1973): 9; Jan H. Chaiken, "Estimates of Offender Characteristics Derived from the Rand Prison Survey," Rand Working Note (January 1978). For an overview, see: Jacqueline Cohen, "The Incapacitative Effect of Imprisonment: A Critical Review of the Literature," in Blumstein, Cohen, and Nagin, *Deterrence and Incapacitation*: 187–243.

15. For an assessment, see: D. Lipton, Robert Martinson, and Judith Wilks, *The Effectiveness of Correctional Treatment: A Survey of Treatment Evaluation Studies* (New York: Praeger Publishers, 1975). The acerbic exchange among Robert Martinson, Ted Palmer, and Stuart Adams illustrates the disagreement about research findings. See *Rehabilitation, Recidivism and Research* (Hackensack, N.J.: National Council on Crime and Delinquency, 1976).

16. This conclusion is controvertible. Some critics contend that the criminal process may cause delinquency by labeling individuals as deviant—Edwin M. Shur, *Labeling Deviant Behavior: Its Sociological Implications* (New York: Harper and Row, 1971)—or by simultaneously teaching criminal skills and attitudes while reducing legitimate opportunities—David Fogel, *We Are The Living Proof: The Justice Model for Corrections* (Cincinnati: W. H. Anderson Company, 1975). Albert Reiss has suggested, in a personal communication to the author, that even measures of incapacitation overstate crime reduction. Reiss points out that many crimes have multiple offenders; removing one or two members of a criminal group does not prevent others from engaging in crime. For present purposes, the *assumption* that convicting offenders reduces crime is made. Of course, all conclusions about the costs and benefits of plea bargaining are contingent on this assumption.

17. Brian Forst and Kathleen B. Brosi offer an interesting model that explicitly introduces consideration of future crime into the prosecutor's decision making calculus. "A Theoretical and Empirical Analysis of the Prosecutor," *The Journal of Legal Studies* 6 (January 1977): 177–92. Their findings cast doubt on any assumption that the prosecutor takes future crime into account. Since that study, Operation Doorstop has been operating as a career criminal program in the United States Attorney's Office in the District of Columbia. This program targets on likely recidivists.

18. Neubauer, *Criminal Justice in Middle America*: 218–19.

19. Landes, "An Economic Analysis of the Courts"; Eli M. Noam, "The Criminal Justice System—An Economic Analysis of Benefits and Interrelations" (Ph.D. diss., Harvard University, 1975); Judith A. Lachman, "An Economic Model of Plea Bargaining in the Criminal Justice System" (Ph.D. diss., Michigan State University, 1975); Judith A. Lachman and William P. McLauchlan, "Models of Plea Bargaining," in *Modeling the Criminal Justice System*, ed. Stuart Nagel (Beverly Hills, Calif.: Sage Publications, 1977): 145–58; Rhodes, "Economics of Criminal Courts"; Posner, "The Behavior of Administrative Agencies"; David L. Weimer, "Plea Bargaining and the Decision to Go to Trial—The Application of a Rational Choice Model," Discussion Paper No. 7804, Public Policy Analysis Program (New York: University of Rochester, 1978); and Richard Adelstein, "The Plea Bargain in Theory: A Behavioral Model of the Negotiated Guilty Plea," *Southern Economic Journal* 44, no. 3 (January 1978).

20. Newman, *Conviction*; Neubauer, *Criminal Justice in Middle America*; S. LaGoy, J. Senna, and L. J. Siegal, "An Empirical Study on Information Usage for Prosecutorial Decision Making in Plea Negotiations," *American Criminal Law Review* 13 (1976): 435; Lynn Mather, "Some Determinants of the Method of Case Disposition: Decision-Making by Public Defenders in Los Angeles," *Law and Society Review* 8 (1973).

21. This question remains alive in the professional literature. Trebach writes: "The plea inducing machinery is a combination of sound advice, intimidation and misleading information." Arnold Trebach, "Cop Out," in Cole, ed., *Criminal Justice: Law and Politics*: 203. In contrast, Skolnick concludes that "the dilemma of the adversary system arises from the fact that such tendencies toward 'cooperation'—under existing conditions—do not demonstrably impede the quality of representation." Skolnick, "Social Control in the Adversary System": 249.

22. Most notably, we have omitted the "conflict" view of law and law enforcement, which claims to be derived from Marxian thought. See John Horton, "Order and Conflict Theories of Social Problems as Competing Ideologies," *American Journal of Sociology* 71

(1965): 701–13; William Chambliss and Robert Seidman, *Law, Order and Power* (Reading, Mass.: Addison-Wesley, 1971); and Richard Quinney, *Critique of Legal Order: Crime Control in a Capitalist Society* (Boston: Little, Brown and Company, 1974).

23. Barbara Wootton, *Crime and the Criminal Law* (London: Stevens and Sons, 1963).

24. H. L. A. Hart, *Punishment and Responsibility: Essays in the Philosophy of Law* (New York: Oxford University Press, 1967).

25. Herbert L. Packer, *The Limits of the Criminal Sanction* (Stanford, Calif.: Stanford University Press, 1968).

26. Gary Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy* 76, no. 2 (1968); George Stigler, "The Optimum Enforcement of Laws," *Journal of Political Economy* 78, no. 2 (1970); Richard Posner, *Economic Analysis of Law* (Boston: Little, Brown and Company, 1972); and M. W. Reder, "Citizen Rights and the Cost of Law Enforcement," *Journal of Legal Studies* 3, no. 2 (1974). Critical comments can be found in the works of James Buchanan and Gordon Tullock, *The Calculus of Consent* (Ann Arbour: University of Michigan Press, 1962); Amartya K. Sen, *Collective Choice and Social Welfare* (San Francisco: Holden Day, 1970); James Buchanan, *The Limits of Liberty* (Chicago: The University of Chicago Press, 1975); and Lee S. Friedman, *The Economics of Crime and Justice* (Morristown, N.J.: Silver Burdett Company, 1976).

27. John Griffiths has defended and extended Wootton's position following Packer's attack. The basic premise of his proposed "family model" is the "reconcilability of interest" (p. 410) of persons involved in the criminal justice process. According to Griffiths: "The difference between the Family Model and the Battle Model (Griffiths' term for Packer's two models) lies precisely in their opposed approaches to the central problem of political speculation: the possible and proper relationship of individual man to the state" (p. 412). Thus, Griffiths proposes a benevolent criminal justice process intended to settle conflicts to the benefit of victims, offenders, and the public, as opposed to an adversary process designed to punish the guilty. "Ideology in Criminal Procedure or a 'Third Model' of the Criminal Process," *The Yale Law Journal* 79, no. 3 (January 1970).

28. H. S. Miller, *Plea Bargaining*: 84–114, 166–169.

29. Packer, *The Limits of the Criminal Sanction*, p. 173.

30. John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971).

2

Research Design

Research and evaluation of the criminal justice system reveal that dismissals and guilty pleas are the dominant forms of case disposition in criminal courts. This dominance persists despite the theoretical importance in Anglo-American jurisprudence of an open, adversary proceeding in criminal cases, and in spite of criticism that the quality of justice suffers from the predominance of "out-of-court settlements."

Critics of out-of-court settlements frequently identify plea bargaining as a cause of this defect. They argue that the substitution of bureaucratic determination of guilt or innocence for a contested trial impedes justice by increasing the chances of erroneous convictions. They also claim that sentencing concessions awarded in exchange for negotiated settlements ultimately erode the deterrent, incapacitative, and retributive effectiveness of law. The public suffers from a less equitable, and less effective, criminal process; consequently, critics propose reforms of plea bargaining.

In spite of this criticism, plea bargaining has its advocates. Their strongest argument is that routine cases must be handled expeditiously. Trials are expensive and disruptive. If more cases were to go to trial, additional dismissals might be required, court delay could build and, ultimately, the criminal justice system could collapse under the strain. In addition (advocates argue), it is unlikely that the innocent are convicted, since contested cases can still go to trial, and sentence concessions, where they exist, are preferable to total failure to convict and punish the guilty.

Critics rest their arguments largely on due process considerations. Advocates frequently take a position closer to what Packer called the crime control perspective. Perhaps these respective positions are so firmly entrenched, and so contingent on divergent values, that they cannot be reconciled. But curiously, neither critics nor advocates cite convincing empirical support for their recommendations when value judgments do not solely determine their positions. Few studies have attempted to determine and measure the causes and consequences of plea bargaining.

To help remedy this deficiency, this study examines the guilty plea process in the District of Columbia criminal court. Of special interest, as noted earlier, are the questions: Who gains and who loses from plea bargaining? Why do plea bargains occur? To answer these two general questions, the analysis proceeds in several steps. These steps, a substantive outline of the study, and a discussion of the data appear in this chapter.

RESEARCH QUESTIONS; RESEARCH DESIGN

To answer the general questions posed above, it was necessary first to determine *what* aspects of the guilty plea process were to be examined, and second, *how* the examination should be conducted. Data came from 1974 arrests processed in Superior Court (Washington, D.C.). To ensure a sufficient number of cases to make statistical analysis meaningful, our examination includes four high-volume charges: assault, burglary, larceny, and robbery. Charge was based on the most serious accusation brought by the arresting officer, even though the defendant may have been prosecuted for a different offense. The charge brought by the police officer is the best available proxy for the offense that the accused is said to have committed, and its use allows a comparison between cases actually prosecuted and cases declined, controlling for offense. However, we are aware that the police may have an incentive to overcharge at this stage, and most of the analysis elaborates on the charge description by controlling for the amount of harm to victims, the property loss, and so on. Other proxies were problematic. According to experienced prosecutors, a less serious felony charge is frequently filed by the screening prosecutor with the expectation that the grand jury will include more serious charges in the indictment, and the final conviction may reflect charge reduction following plea bargaining. Therefore, we concluded that neither the charge initially filed nor the conviction charge was appropriate for this study.

The offense categories chosen include the following narrower offenses: assault (armed assault, simple assault, assault on a police officer) and robbery (armed, other). With respect to each charge classification, the following aspects of plea bargaining are examined.

(1) It was argued in Chapter 1 that plea bargaining cannot be studied in isolation from other court processes. The amount of plea bargaining is likely to influence, and in turn be influenced by, the volume of cases filed with the court, the number of cases dismissed by the prosecutor, the willingness of defendants to go to trial, the severity of sentencing, and the amount of recidivism. The initial step in the analysis, then, was to describe the overall "flows" of cases through the court process. These flows are discussed in the next chapter.

(2) Plea bargaining opponents claim that sentencing concessions undermine the deterrent, incapacitative, and retributive objectives of the criminal sanction. Defenders of the practice indicate that concessions are necessary to assure the efficient processing of cases and to secure convictions. Both arguments suggest a question: What sentencing concessions are awarded to defendants who enter guilty pleas in the Superior Court of the District of Columbia?

It is an easy matter to compare sentences awarded to defendants entering guilty pleas with sentences received by defendants convicted at trial. However, inferences drawn from this simple comparison may be misleading if persons who enter guilty pleas differ substantially from defendants convicted at trial.[1] Therefore, in addition to comparing sentences in a straightforward fashion, a more refined analysis was conducted.

The characteristics of a defendant and his case were examined for defendants going to trial, entering a guilty plea, and having their cases nol prossed following filing. This examination did not reveal gross differences between individual cases terminated by trial and those terminated by plea but, to be more certain, a regression equation was used to estimate the effect that criminal record, crime characteristics, and personal characteristics had on the severity of the sentence received by defendants *convicted at trial*. These equations were estimated for defendants accused by the police of assault, burglary, larceny, or robbery. (Specification of all the regression equations referred to in this chapter can be found in the technical

appendix, which also contains statistical results. Findings are briefly summarized, where relevant, in the text.)

Then, using the regression equations estimated in the previous step, it was possible to *predict* the sentence that a defendant who entered a guilty plea probably would have received *if he had been convicted at trial*. The regression equations also made it possible to predict the sentence that a defendant whose case was nol prossed would have received *if he had been convicted at trial*.

With the availability of these predictions, it was possible to compare the sentences received following a guilty plea with the sentences that would have been received if convicted at trial. Since these "predicted" sentences control for reported characteristics of the defendant and his case, the resulting comparisons are sharper reflections of bargaining concessions than could be gained by comparing sentences following a guilty plea with sentences received following conviction at trial. In addition, the predictions afford insight into what the public loses when case pressures force suspects to be released without processing. This indication is important to an examination of plea bargaining, since a reduction in pleas would likely increase dismissals. Thus, these predictions indicate (a) what is lost by granting sentence concessions in exchange for guilty pleas and (b) what is gained by substituting inexpensive pleas for expensive trials. These comparisons can be found in Chapter 4.

(3) Defenders of the guilty plea process claim that plea bargaining is necessary to secure convictions. This assertion has two aspects. First, prosecutors, judges, and defense counsel all have limited resources, and courtroom work groups have a limited capacity to handle frictions resulting from trials. Thus, if the volume of trials greatly increased, out of necessity prosecutors would likely be forced to decrease the number of cases filed and increase the number nolled. Ultimately as trial volume increased, the conviction rate would fall. A second aspect of the assertion is that conviction following a guilty plea is certain, while a trial may lead to acquittal. Therefore, guilty pleas increase convictions both by "stretching" prosecutors' resources and by eliminating the uncertainty of trial.

The empirical validity of the resources argument is deferred to Chapter 5. In Chapter 4, attention focuses on the claim that a guilty plea increases the probability of conviction because trial outcomes are uncertain. Again, the analysis could proceed by comparing the proportion of trials leading to conviction with the proportion of guilty pleas leading to conviction (equal to one). This simple comparison, however, begs the question of what would happen to defendants entering guilty pleas if they were to go to trial. A related question of interest is whether defendants whose cases were dismissed would have had the same conviction probability at trial as those defendants who actually did go to trial.

Since the probability of conviction at trial cannot be directly observed for cases dismissed or pled out of the system, one must choose an alternative path to analyze these questions. One such path is to use as an indication of the probability of conviction the screening prosecutor's intuitive response to the question: What is the probability of winning this case? Answers to this question were previously collected as part of PROMIS, but unfortunately, this direct approach is problematic. Empirical analysis showed that the prosecutor's estimate is *not* highly correlated with the observed probability of conviction for criminal cases going to trial. Moreover, the wording of this question (which lacks specificity with respect to which probability is intended—conviction by plea or by trial) was not directly suitable for present needs, which made use of the answer suspect.

A second path was chosen: use of a regression equation to estimate the probability of conviction for defendants going to trial. Explanatory variables include the availability of physical evidence, the availability of lay witnesses, the number of

charges, whether the defendant was arrested at the crime scene, whether the defendant was arrested the same day the offense was committed, the defendant's pretrial release status, and whether there was corroborating or exculpatory evidence. The equations were estimated using data on defendants who did go to trial. The dependent variable was conviction, although conviction may not have been for the charge brought by the police.

The results of the regression analysis were then used to "predict" the probability of conviction at a hypothetical trial for defendants who in fact entered guilty pleas, and for defendants whose cases were in reality dismissed. Altogether, then, in Chapter 4, findings are presented that compare the actual probability of conviction (for defendants going to trial) with the predicted probabilities of conviction (separately for defendants who entered a guilty plea or who were dismissed), as well as with the prosecutor's estimate of the probability of conviction (for the same set of cases). These comparisons allow an objective assessment of the second aspect of the claim that the guilty plea process enhances the conviction rate.

(4) Anticipating results from the analysis of the probability of conviction at trial and the sentence received if convicted at trial, it appears that defendants who enter guilty pleas (a) frequently forego a reasonably good chance of acquittal at trial but (b) do not always receive demonstrable sentence concessions from the prosecutor or the judge in return. Also, defendants who are dismissed (a) frequently appear to be factually guilty and (b) had they been convicted, appear likely to have received a sentence comparable to defendants convicted at trial. These findings are surprising—they demonstrate that plea bargaining does not necessarily lead to a sentence concession, and that cases dismissed would not always be poor cases to prosecute. In Chapter 4, the prosecutors' explanations of why the observed disposition occurred are examined. Their explanations suggest reasons for what is observed in the next step of the analysis.

(5) To this point, the analysis has examined the probability of conviction and the sentence received if convicted, both at trial and by guilty plea. These are important considerations, since a primary purpose of this study is to determine what is "gained" and "lost" by reliance on guilty pleas to dispose of the majority of criminal cases. But these concerns do not directly indicate how present case disposition affects future criminal behavior. Chapter 4 concludes with an attempt to answer this question.

The approach is first to consider whether future criminal behavior differs according to the method of case disposition: conviction by guilty plea, conviction by trial, acquittal by trial, nolle (dismissal), and declination at screening. Future criminal behavior is defined as whether the defendant was arrested for a felony or misdemeanor within a period two years subsequent to the disposition of his initial case. New felony arrests are differentiated from new misdemeanor arrests, and the analysis controls for the charge involved in the original arrest.

Future crime represents a cost to the community. Future judicial processing represents a cost to the judicial system. To estimate the *future* judicial cost of the *present* case disposition, the type of disposition following rearrest was examined. That is, if a defendant in the 1974 data base was rearrested on a new offense following disposition of his '74 case, then we recorded whether the new arrest resulted in a trial, a guilty plea, a nolle (dismissal), or a decision to decline prosecution. Using the information about rearrest and future processing or dismissal, rates of future crime and future judicial dispositions were tabulated for each type of present disposition, controlling for present offense.

(6) Having examined recidivism and the future prosecution of individuals who appeared earlier in Superior Court, a major question originally posed in this study has been addressed, namely: Who gains and who loses from plea bargaining?

Next, attention centers on the second major question posed in the introduction: Why do plea bargains occur? This is a complex question. Many factors theoretically important to the guilty plea decision cannot be investigated within the confines of the available data. Nevertheless, three major considerations are examined.

First, it has been argued that resource constraints and the need to stabilize courtroom work groups influence the rate at which criminal cases are filed and, also, the extent to which plea bargaining is required to clear court dockets. The resource argument is not directly testable in this study because resource constraints have long-run effects that are not observable in the present data base.[2] While it has been demonstrated elsewhere that a prosecutor's willingness to file criminal cases increases with the size of his staff, and that heavy case loads must be cleared by offering plea bargaining concessions, these findings follow from cross-site comparisons and interrupted time series analysis.[3] Thus, the findings pertain to courts that have adjusted to long-run differences in work loads. Available evidence does *not* demonstrate that patterns of handling criminal matters vary over the short run, i.e., that there will be more plea bargaining or a higher rate of dismissal as work loads within a specific jurisdiction temporarily expand.

Although present data limit the examination to short-run effects, it is possible to use regression techniques to examine whether two factors varied with work loads between January 1974 and December 1975: (a) the rate at which the U.S. Attorney's Office in the District of Columbia nolled criminal cases and (b) the ratio of guilty pleas to trials. Work loads were alternatively measured by (a) the number of felony and misdemeanor trials completed during a specified time period, (b) the number of felony and misdemeanor cases filed during that period, and (c) the number of felony and misdemeanor arrests during that period. Because the Office of the U.S. Attorney is divided into felony and misdemeanor sections, separate analyses were performed for each branch. Findings are discussed in Chapter 5.

Again anticipating future results, short-run changes in work loads appeared *not* to influence the processing of criminal cases over the time period examined. Therefore, consideration of this factor was eliminated from the remainder of the analysis.

(7) Next, we sought to discover the conditions under which a guilty plea was likely to have occurred. As a first step, it was necessary to examine whether the probability of a charge reduction (reputed to be the major form of plea bargaining in the D.C. courts) varied with the probability of conviction at trial, the severity of the sentence that would be received following conviction at trial, mitigating factors peculiar to each case, and the defendant's pretrial release status. In a second step, the severity of the sentence received following a guilty plea was examined to determine whether it reflected (a) the probability of conviction at trial, (b) the sentence that would be received if convicted at trial, and (c) the charge reduction negotiated with the prosecutor. Then in a final step, all trials and guilty pleas were examined to ascertain whether the likely outcome of a trial influences the decision to enter a guilty plea. Findings are reported in Chapter 5.

Findings indicate that the likelihood of a reduced charge and the likelihood of a sentence concession were strongly influenced by the sentence that would be received if convicted at trial, and also by the probability of conviction at trial. However, the model was a poor predictor of which defendants went to trial. That is, to this point in the analysis, we were able to explain much of the dynamics of plea bargaining and sentencing following a guilty plea, but the analysis was unable to explain which defendants went to trial.

(8) A final step was conducted. Plea bargaining may be explainable by the idiosyncracies of individual prosecutors, defense counsel, and judges. To test this

hypothesis, the rates of participation in guilty pleas for different prosecutors, judges, and defense counsel were examined. Rankings that remained constant across the four crime categories examined—assault, robbery, larceny, and burglary—were taken as evidence that individual preferences were important in determining the extent of plea bargaining in the District of Columbia criminal courts.

In summary, the research design addressed the two questions:

- Who gains and who loses from plea bargaining?
- Why do plea bargains occur?

With respect to the first question, it was necessary to estimate what would have happened to an individual if his case had gone to trial rather than being terminated with a guilty plea or dismissal. This required an examination of the probability of conviction at trial and the severity of the sentence received by those who were convicted. Then, the impact that present disposition had on future criminal behavior and future judicial processing was examined. With respect to the second question, an attempt was made to determine the factors resulting in reduction of charge prior to a guilty plea, the sentence received following a guilty plea, and why defendants exercise their prerogative to go to trial. We concluded with an examination of the rates at which individual prosecutors, defense attorneys, and judges settle cases by pleas.

DRAWING INFERENCES FROM QUANTITATIVE DATA

We said in Chapter 1 that the analysis is essentially empirical and that the attempt to quantify observations and support conclusions statistically complements the mainstream of existing research on plea bargaining, which is more qualitative. This statement is not intended to imply that quantitative research is superior to qualitative research. Nor does quantitative analysis necessarily allow the researcher to infuse his findings with objectivity. On the contrary, conclusions drawn from the statistics reported here are premised on two assumptions, and the conclusions hold largely to the degree that the assumptions are valid. First, we assume that by examining the cases of defendants who went to trial we can draw inferences about *hypothetical* trials for defendants who actually entered guilty pleas and for defendants who actually had their cases dismissed. Second, we assume that operational definitions of the theoretical concepts "factual guilt" and "legal guilt" can be identified. The extent to which these assumptions hold can only be assessed subjectively, and thus, our findings themselves remain subjective. Since both assumptions are so crucial to the analysis, it is appropriate to close this chapter with a discussion of the reasons for their adoption.

Drawing Inferences About Hypothetical Trials

In order to understand and explain human behavior, social scientists use models of the general form: A is affected by B, C, and D. For example, A might be the incidence of criminal behavior in a city, while B is the probability that offenders are convicted, C is the severity of the punishment administered to convicted offenders, and D is a measure of the city's socioeconomic environment. The model says that the amount of criminal behavior (A) decreases with the probability of being caught (B) given the punishment for conviction (C) and the cultural setting (D). Statistical analysis is frequently used to confirm theoretical models, such as this illustrative deterrence model, and to quantify the effect that B has on A, holding C and D constant.

When buttressed by good theory, statistical analysis can be a powerful tool. Not only does it provide insight into the dynamics of individual and group behavior

given existing settings (i.e., given existing levels of B, C, and D), it also provides insight into what would happen if the current setting changed. In the abstract, statistical analysis provides insight into how A would change as B increases, holding C and D constant. More concretely, statistical analysis allows researchers to predict next year's gross national product, the incidence of murder if the death penalty is expanded over a wider range of circumstances, and the enrollment of white students at private schools as integration proceeds, just to mention a few examples. In these examples, statistical analysis is used to predict what would likely happen under a hypothetical set of circumstances even though those circumstances, and their consequences, could not be observed directly. As such, predictive statistics provide one important basis for policy recommendation.

In this study of plea bargaining, statistical analysis is used to predict what would happen to defendants had they gone to trial even though, in reality, their cases terminated with either a guilty plea or dismissal. The necessity of drawing this inference is obvious: the paramount concern of this study is to investigate what would happen if trials were used more frequently than at present to dispose of criminal cases.

Just as we can never be perfectly certain of next year's gross national product, or the deterrent effect of the death penalty, or the private school enrollment following a given integration strategy, for individual criminal cases we can never really *know* what would have happened if a trial had occurred instead of a guilty plea or dismissal. It is only possible to draw inferences from observing the outcomes of similar cases that actually were tried. The accuracy of these predictions depends both on our understanding of the trial process and on our ability to measure those variables considered relevant to determining case outcomes.

Can we accurately determine whether a defendant who actually entered a guilty plea would have been convicted at trial? Can we determine precisely the sentence that a defendant would have received if he had been convicted at trial rather than actually being dismissed? Obviously, the answer to both questions is no. The criminal justice process does not operate with this certainty, and it would be nonsense to assert that statistical analysis can discover a regularity that does not in reality exist.

Instead, it is necessary to be content with probability statements of the type: if X is a case that closely resembles a typical case of type Y, and if it has been shown empirically that cases of type Y lead to conviction two out of three times when they go to trial, then the probability of conviction at trial for case X is assumed to equal about .66.

Previous research on the PROMIS data confirms that too many factors are involved to determine precisely, for individual cases, whether a conviction will result if the case goes to trial, and what the sentence will be if the trial leads to conviction. Fortunately, our interest does not center on predicting the outcomes of individual cases. Rather, our concern is with determining the proportion of convictions in a large group of cases of type X. Provided the estimated probability of conviction for individual cases is accurate, and assuming that there are many cases of type X, the proportion of convictions to be expected out of the set should not be misleading.[4] In the following analysis, the comparisons drawn between guilty pleas and trials are made for groups of defendants. Thus, the reasonableness of these comparisons does not rely strictly on the accuracy of predictions for individual cases, so long as it is possible to obtain an accurate estimate of the probability of conviction for a representative X.

The problem remains that X and Y must be alike for the above comparison to be meaningful. As an illustration, suppose that defendants of type X have extensive criminal records, while defendants of type Y had no previous contact with the

police. In such a perverse case, the comparison between X and Y would be of little use because the probability of conviction for Y might be a biased estimate of the probability of conviction for X.

This problem can be corrected statistically provided the relevant factors that cause X and Y to differ are identified and measured. Recognizing this necessity, the analysis was designed to control for aspects of the defendant's case that seemed to influence trial outcomes. Have all important aspects of a defendant and his case been identified and measured? Undoubtedly they have not, but an attempt was made to identify any factors that would *systematically* differ among defendants going to trial, entering a plea of guilty, and having their cases dismissed.

It is, however, impossible to prove that guilty plea defendants do not differ in some significant and unexplained way from persons going to trial. This problem is not unique to this study; all reasearch is subject to the criticism that some important factors were not considered in the analysis, with the consequence that spurious inferences have been drawn from the discovered correlations. As social scientists, belief in our findings rests in having no theoretical reason to believe that factors so important as to alter our basic conclusions have been omitted from the analysis.

There remains an additional important caveat with respect to drawing inferences from quantitative data. The statistical analysis used does a good job of describing the disposition of routine criminal cases. The technique does not necessarily describe the processing of exceptional cases.

If most defendants receive no sentence concessions following a guilty plea, but an exceptional and perhaps highly publicized case results in a marked sentence reduction, then the inference drawn from the statistical analysis will be that "defendants do not receive sentence concessions in exchange for guilty pleas." While this statement is accurate in generalizing the routine outcome of plea bargaining, it may be that the exceptional cases are—by virtue of being exceptional—of great interest. Our analysis fails to capture the significance of such rare events.

Similarly, if a few individual defense attorneys are notorious at avoiding trials, while most attorneys go to trial at about the same rate, the statistical analysis will fail to reveal a pattern. If some judges are excessively lenient in awarding plea bargain concessions, but other judges differ little in the sentence awarded, the analysis will not reveal a disparity among judges.

However, if the analysis suffers from the disadvantages of not being able to capture rare events, it has a contrasting advantage that conclusions about plea bargaining are not shaded by infrequent but highly visible exceptions to the routine processing of criminal cases. It is this routine that is the real concern of this study; this emphasis may explain why the findings reported here differ from those drawn by other researchers using more qualitative techniques.

Operationalism of Legal and Factual Guilt

In Chapter 1, we summarized the due process model and the crime control model, as these two perspectives on criminal justice were developed by Herbert Packer. These two perspectives are frequently juxtaposed in evaluations of plea bargaining. On the one hand, plea bargaining is criticized as being detrimental to due process safeguards; on the other, it is applauded as streamlining justice, thereby facilitating crime control.

The due process and crime control models incorporate two theoretical concepts: factual guilt and legal guilt. From the crime control perspective, conviction of the factually guilty should be maximized. From the due process perspective,

identification of, and freedom for, the legally innocent is a primary goal. To demonstrate how these two different emphases color an evaluation of plea bargaining, and to measure the extent to which the two emphases conflict in the criminal justice process, operational definitions of these two theoretical concepts are necessary.

This is a difficult task; neither the real world counterpart of factual guilt, nor the real world counterpart of legal guilt is observable, at least within the confines of the present data base. Factual guilt is a state of fact; either the defendant committed the crime with which he is charged or he did not. Since his behavior is not directly observable by the researcher, factual guilt cannot be known. Legal guilt is a question of law; either the evidence is sufficient to convince a judge or jury that the defendant committed the crime with which he is charged and that he is criminally culpable, or the evidence is insufficient to establish this "beyond a reasonable doubt." Beyond observing the actual decisions of juries, legal guilt is also unobservable, first because there is no objective quantum of evidence recognized as definitively establishing legal guilt, and second, because juries are fickle—evidence judged sufficient to establish "guilt beyond a reasonable doubt" for one jury may not suffice for a second.

Thus, searching for an objective proxy for factual guilt and legal innocence, like the search for a universal solvent, would be quixotic and is not attempted in this study. But it is not necessary to abandon the search for a *subjective* proxy to represent factual and legal guilt. Operational definitions are adopted here that are consistent with the concerns expressed in the crime control and the due process models. While neither definition represents legal or factual guilt unambiguously, both represent the real world counterparts of these theoretical constructs in a manner that illuminates the conflict between the due process and crime control concerns.

Turning to factual guilt first, an assumption is made in the crime control model that the presumption of factual guilt is increasingly valid as the defendant penetrates deeper and deeper into the criminal justice system. If the arresting officer decides to arrest, if a decision is made to ask the screening prosecutor to screen the arrest report, and if the screening prosecutor judges that the evidence is sufficient to file a criminal case, then there is a strong presumption *from the standpoint of the crime control model* that the defendant is factually guilty. If, in addition, the prosecuting attorney either prosecutes the case or dismisses it for reasons other than a lack of merit or insufficiency of evidence, then it is reasonable to presume *from the crime control perspective* that the defendant is factually guilty.

It is imperative to clarify what factual guilt means when it is used in this analysis. It does not mean that the defendant has, in fact, committed the offense with which he is charged. After all, criminal action is unobservable by the researcher and cannot be objectively verified. Nor can we objectively suppose that a defendant who is factually guilty by this criteria should be convicted. More narrowly, factual guilt means that *from the perspective of the crime control model*, at this point in the criminal justice proceedings (a) the defendant is treated as if he were factually guilty and (b) the system is judged by its ability to secure his conviction. In order to understand the objectives of the crime control model, it does not matter whether this presumption is accurate or inaccurate; nor does it matter whether this presumption is consistent with an abstract notion of "justice." The presumption exists as a part of the crime control model and imposes strains on the criminal justice process to the extent that the incentive to secure a conviction is inconsistent with due process concerns.

Next, we turn to the due process model and to the concept of legal guilt. By legal guilt, it is meant that (a) there is sufficient evidence to convince a judge or jury that a crime has been committed, (b) evidence exists to convince a judge or jury beyond a reasonable doubt that the defendant committed the offense, (c) the prosecutor has countered any defense arguments asserting procedural irregularities, and (d) the prosecutor has established that the defendant is culpable for his actions.

As was stated above, these standards do not establish a quantum of evidence that is sufficient to infer legal guilt. The only standard that is reasonable to adopt, and indeed, the standard that is consistent with the due process model, is that conviction at trial demonstrates legal guilt. If acquitted at trial, a defendant can be said to be legally innocent.

Of course, the criteria say nothing about the legal guilt or innocence of defendants entering pleas of guilty, nor about defendants who have their cases dismissed prior to trial. Therefore, this concept must be expanded to account for these contingencies. This expansion is accomplished by inferring the likelihood of conviction at a hypothetical trial for defendants who actually entered guilty pleas (and for defendants who had their cases dismissed) based on observations about trial outcomes. This inferential guilt criterion was discussed above.

While it is impossible to adopt an unambiguous standard for legal guilt, we have adopted a standard that is consistent with the due process perspective: convictability at trial. We do not assert that legal guilt could not be defined in an alternative fashion (indeed, criminal case law makes it clear that a defendant who is convicted by guilty plea is legally guilty regardless of how he would have fared at trial, provided certain procedural regularities have been followed). This criterion states simply that, *from the due process perspective*, a defendant is legally guilty if he would be convicted at trial; otherwise, he is legally innocent.

This convictability criterion is especially transparent in allowing examination of the due process model, particularly as this model comes into conflict with the crime control model. Factual guilt and legal guilt are not the same. Some persons who are factually guilty are legally innocent. If from one perspective the criminal justice system is judged by its ability to convict the factually guilty, and if from an alternative perspective the criminal justice system is to be judged by its ability to acquit the legally innocent, then it is evident that an evaluation of plea bargaining that takes both perspectives into account must be equivocal.

Notes

1. See Albert J. Reiss, Jr., "Public Prosecutors and Criminal Prosecutions in the United States of America," *The Juridical Review*, Part 1 (1975): 20–21, for a discussion of this problem.

2. A hypothetical example illustrates the difference between short-run and long-run effects. Suppose the prosecutor has historically reviewed an average of 100 arrests per week. Of the 100, 50 are prosecuted, 40 result in guilty pleas and 10 go to trial. If the rate of arrests and prosecutions has lasted for, say, five years, the prosecutor would be in long-run equilibrium—he has no incentive to change the rate of prosecutions or the ratio of trials to pleas. Weeks with a higher than average work load are balanced by weeks with a lower than average work load.

If, however, the work load grows to 200 arrests per week in the sixth year, he can no longer simply average short-term fluctuations but, rather, must adjust his total output. He might decide to prosecute an average of 70 cases per week, taking only 5 cases to trial, and

disposing of the remainder by guilty plea. In the latter instance, he has adjusted to long-run changes. The present data allow us only to observe adjustments in the short run and, as a result, prevent a test of the long-run expectation that criminal case handling varies with the prosecutor's work load.

3. See footnote 12, Chapter 1.

4. This argument can be made more formally. Let P be the probability of conviction for a defendant of type X, where P = .60. If we attempted to predict, for 500 defendants, the outcome of a trial, we would expect to be correct a certain number of times. Suppose that we arbitrarily picked 300 defendants and put them into the conviction category, placing the other 200 in the acquittal category. As a consequence, we would expect on the average to be accurate in only 52 percent of our guesses (.6 × 300 + .4 × 200)/500. Suppose that we put all defendants in the most likely category (conviction). We would still be accurate in only 60 percent of the guesses (.6 × 500)/500. Clearly our ability to predict the outcome of individual cases is quite limited.

Instead, suppose that interest centers on predicting the proportion of convictions in 500 trials. According to the central limit theorem, the proportion of convictions will be between $.6 \pm [1.65 \sqrt{.6} \times 4/ \sqrt{500} = .6 \pm .036$ (95 percent confidence interval). Provided the probability, P, is accurately assessed, the estimate of the proportion of convictions will be quite precise.

3

An Overview of Case Processing

In Chapter 1, we discussed theoretical perspectives on the guilty plea process, cited supporting empirical findings of other researchers, outlined some normative positions relevant to criminal justice, and presented questions to be answered about plea bargaining. In Chapter 2, we developed a research design to address those questions. In this chapter, we move from the world of theory to the concrete setting of the Superior Court of the District of Columbia. First, an overview of the judicial process is presented. Then, the flow of cases through the courts is diagramed. Finally, the unique flows of four types of offenses—assault, robbery, larceny, and burglary—are outlined.

THE SETTING

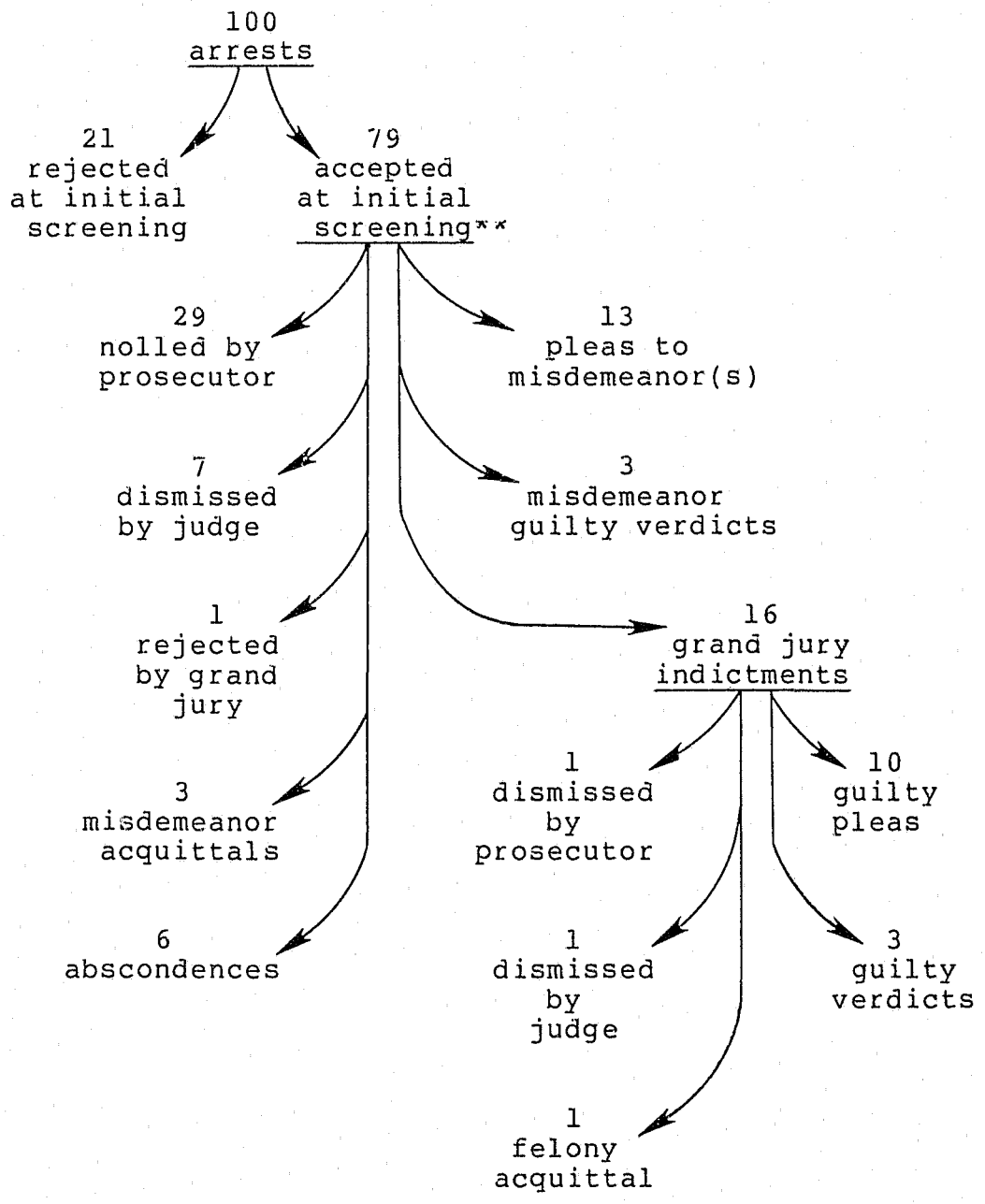
In the paragraph above, the term "flow" of cases was used twice. Indeed, from an analytic perspective, the flow of cases will be important to understanding the findings reported in Chapters 4 and 5. It is necessary, therefore, to define what is meant by a court flow.

If, at a point in time, the number of criminal cases undergoing each court process was recorded, we would have a measure of court work load at that point in time. For instance, the record might include the number of felony arrests, the number of indictments, the number of trials, and the number of guilty pleas for, say, a week. If a record was maintained over sequential weeks, it would then be possible to observe how cases moved from arrest to indictment, from indictment to trial, and through other court proceedings. It is this movement that is intended when we refer to the flow of cases.

An analogue to court flows is a network of pipes carrying fluid from a single source to many possible faucets. The volume of fluid passing through any branch of the network depends on the capacity of that and other branches, which in turn are assumed to be regulated by a series of valves. Attention centers both on how the fluid progresses through the system, where it eventually leaves the network of pipes, and the relationship between the flows and the setting of the valves.

Our interest in criminal courts also centers on how cases are processed through the system, how cases are terminated, and how the flows are regulated. The police, defendant, prosecutor, defense counsel, and the judge and other functionaries regulate the "valves." This regulation is accomplished through decisions to arrest, decisions to press charges, decisions to nol pros cases, decisions to offer and to agree to guilty pleas, and decisions to sentence convicted suspects to jail. A flow representative of the District of Columbia Superior Court in 1974 is presented in Figure 4.

Figure 4.
Outcomes of 100 "Typical" Arrests Brought to the D.C. Superior Court in 1974*



*Based on the actual flow of 17,534 arrests recorded in the Prosecutor's Management Information System (PROMIS).
**Total does not agree due to rounding error.

The Police and the Public

Citizens are the initial source of suspects into the criminal justice flow. As is true in most cities, much crime is unreported in the District of Columbia. According to victimization surveys, an estimated 96,800 criminal victimizations were committed against District of Columbia residents and businesses in 1973. Only 42 percent of all personal crimes, one-half of all household crimes, and four-fifths of all commercial burglaries were reported to the police.[1] In addition, an arrest is often contingent on how a citizen defines a potential criminal incident and on how he expects the police to react.[2] Since most arrests result from citizen complaints, the public controls the initial valve in the criminal justice network.[3]

Besides their willingness to report crimes, citizens regulate court flows in a second manner, which will have added significance as this analysis progresses. The availability of lay witnesses is frequently necessary, sometimes crucial, to successful prosecution. When witnesses are reluctant to testify, prosecution frequently falters, and when complaining witnesses are reluctant to have an offender punished (such as in domestic relations cases), prosecution is less likely. As an illustration, when prosecutors in Superior Court reported reasons for case dismissals, 59 percent of the assault dismissals, 27 percent of the robbery, 12 percent of the larceny, and 31 percent of the burglary dismissals were attributed to "witness problems." Thus citizens not only regulate the initial intake of criminal cases, but also are instrumental in determining how a case is ultimately handled.

Of course, police serve as intermediaries between the public and the court (at least until the citizen is called as a witness). While police are highly dependent on citizen initiative and are often receptive to citizen wishes with respect to how a situation is handled, the ultimate decision to arrest is a police prerogative. It is evident that police serve an important screening function in this regard; according to Reiss, a minority of citizen complaints concerning criminal matters are eventually defined as criminal by the police.[4]

In addition to mediating citizen wishes, police make "on view" arrests that are not initiated by citizen complaints. A majority of these arrests result from victimless crimes. Besides these reactive (citizen initiated) and proactive (police initiated) arrests, it has been shown in other PROMIS research reports that the police officer's ability to provide evidence, including witnesses, is a prime ingredient in successful prosecution.[5] The police officer plays an important role, then, not only in supplying the criminal justice system with defendants but also in being the primary source of information about the crime and its likely perpetrators.

In the District of Columbia, the Metropolitan Police Department (MPD) is the principal law enforcement agency (supplemented by federal law enforcement agencies and special police). In FY 1975, the MPD made 31,647 arrests in response to 56,888 complaints. These arrests begin the flow of cases analyzed here.

Prosecution: The Screening Process

Following citizen complaints and police arrests, prosecution in the District becomes the responsibility of the United States Attorney. Although a federal agency, the U.S. Attorney's Office prosecutes violations of the local criminal code, as well as offenses arising under federal law. The former cases are handled in the Superior Court of the District of Columbia—the equivalent of a state court of general jurisdiction; the latter proceed to the U.S. District Court.

The U.S. Attorney's staff consists of about 160 lawyers. About half are assigned to Superior Court, either to the felony or misdemeanor division.[6] The least experienced attorneys are assigned to misdemeanor trials and screening of misdemeanor

arrests, and attorneys with somewhat more experience are assigned to screen felony arrests and present cases to the grand jury.

Arrests brought to Superior Court are screened, usually within 24 hours of arrest, by Assistant U.S. Attorneys, who may accept them as charged by the police, accept them with changes, or reject them entirely. The U.S. Attorney provides written policies pertaining to this screening process. Those MPD arrests that are rejected at screening are reviewed by the MPD's Case Review Section; a few of these may be presented again and may then be accepted. (In the District of Columbia, case acceptance by the prosecutor is referred to as "papering"; to reject a case is to "no-paper" it.) Accepted cases that are liable to sentences of one year or less are handled as misdemeanors; others that are accepted are prosecuted as felonies. At this initial screening stage, the U.S. Attorney's Office rejected 21 percent of all arrests brought to the Superior Court in 1974—primarily because of witness problems and the insufficiency of evidence.[7]

Usually on the same day as screening, felony cases go to presentment, at which time the defendant is informed of the charges against him. Counsel is appointed to defendants who claim indigency, the date for the forthcoming preliminary hearing is set, and pretrial release decisions are made. If the defendant does not waive his rights, the next step in the judicial process is the preliminary hearing.

At the preliminary hearing, a judge, after hearing testimony, determines whether there is probable cause to believe that a crime has been committed and that the defendant is responsible. If probable cause is found, the defendant is bound over for the action of the grand jury. If not, he is immediately discharged. The prosecutor may decide to present the case to the grand jury notwithstanding the court's finding of no probable cause, in which case an indictment may be returned. The prosecutor may drop the charges (nolle prosequi) in any case at any time prior to indictment by the grand jury. This occurred in 29 percent of all cases (including misdemeanors) in 1974. Charges may also be reduced from felonies to misdemeanors. This may occur at any time, but usually occurs prior to indictment.

If the prosecutor decides to bring the case to the grand jury, he must present the facts, supported by a witness or witnesses, before a jury of from 16 to 23 people. In simple cases, little preparation is required and one attorney may present a dozen cases in the course of a day. When problems arise or complexities are apparent, several days may elapse, during which the police seek additional evidence or witnesses, scientific tests are performed, and conferences with police and lay witnesses are held by the prosecutor. In most cases, preindictment plea offers are made to the counsel for the defendant, and plea negotiations begin prior to grand jury presentment. These offers, generally more generous than what might be expected after indictment, are withdrawn if an indictment is returned by the grand jury. The grand jury infrequently rejects a case. In addition, a few cases originate in the grand jury.

If indicted, the defendant is arraigned, usually within two weeks of the indictment. At arraignment, he hears the indictment read, enters a plea, and if he enters a plea of not guilty, specifies whether he wants a jury or bench trial. Of course, he may waive the right to a jury trial later, and may change his plea to guilty following an initial plea of not guilty.

The Plea Bargaining Process

In addition to plea negotiations conducted prior to indictment, at any time prior to trial the defense attorney and trial prosecutor may meet to negotiate a guilty plea settlement. Over the years, these sessions have become routinized, and they

rarely last more than five or ten minutes. Few formal policy guidelines pertain to the bargains offered (i.e., weapons charges must not be bargained away; felonies must not be reduced to misdemeanors), but prosecutors are expected to clear bargains with their supervisors. Unlike some other juridictions, judges in the District do not participate in the negotiations.

Generally, bargains are limited to the reduction of counts contained in the indictment. While sentences are not directly negotiated, the number of counts, and types of offenses included in the final plea, establish a ceiling for the length of time that could be served. Sometimes the plea bargain is likely to have little effect on the sentence and, instead, is intended to mitigate other aspects of the offense (such as changing statutory rape to rape because the former has a more negative stigma, or reducing armed murder II to armed manslaughter). Occasionally, the settlement will result in a felony being reduced to a misdemeanor; in general, however, felony reductions are contrary to Office policy and occur only in cases in which the evidence (or low probability of conviction of a felony count) warrants.

Once a deal has been offered, the defense attorney informs his client. The client need not accept the offer. If he refuses, a counteroffer might be made, but apparently few offers-counteroffers are made in the D.C. courts. Exceptions occur when disagreements arise over questions of fact, such as the extent of the defendant's past criminal record. If the deal is rejected, the case proceeds to trial.

It is reputed that the earlier a deal is accepted, the more leniency the defendant can expect. Specifically, a guilty plea entered at arraignment is expected to net a lighter sentence than would a deal worked out just prior to trial. It is also reputed that an explicit bargain need not exist, that with or without reduced charges, judges are said to reward guilty pleas with leniency.[8] But a reduction in charges does allow the defense attorney to show his client tangible evidence that he has produced something of value, and perhaps he has, for charge reductions at least increase the certainty that an extremely long sentence will be avoided.

There appears to be little judge shopping in felony cases, as judges are assigned to cases on a random basis and stay with the case from indictment through sentencing. A skillful attorney may be able to use continuances to manipulate the court calendar, and he has an incentive to do so since judges have differing reputations for harshness. Apparently, judge shopping is more likely in misdemeanor cases. Judges are assigned to these cases as they become available, and by tactfully using continuances, attorneys can exercise some control over the judge assigned.[9]

If the plea bargain negotiations fail, and the defendant decides to go to trial, various types of motions, status hearings, or delays due to court problems may occur. It is also possible that the prosecutor may move to dismiss the case prior to, or even at, trial. Less frequently, cases are dismissed by the court on its own motion or on a defense motion. If the defendant is convicted either by a guilty plea or trial, a presentence report is prepared by the probation office for all felonies and some misdemeanors.

As Figure 4 illustrated, almost one in four arrests is rejected at the initial screening, and nearly one in three cases filed is nolled by the prosecutor. Only 16 percent of all arrests result in misdemeanor convictions and about 13 percent terminate in felony convictions. Other cases end in dismissals, acquittals, or abscondences. Thus, most cases are not prosecuted (or are dismissed), and guilty pleas account for between three and four of every five convictions.

A recent study of a number of jurisdictions with the PROMIS system revealed that case processing in the District of Columbia is not atypical of case processing in other settings. In the District, prosecutors reject somewhat more felony cases

than their counterparts in Cobb County (Ga.), Milwaukee, and Salt Lake, but they reject considerably fewer than prosecutors in New Orleans and Los Angeles. The rate at which filed felony cases go to trial in the District is greater than in about half the PROMIS sites studied (Cobb County, Rhode Island, Golden [Colo.], Milwaukee, and Kalamazoo) but less than in the others (Los Angeles, Florida Second Circuit, Detroit, Louisville, Indianapolis, and New Orleans). However, unlike other sites, in the District a trial is almost always by jury. The percentage of convictions that are guilty pleas is comparable across the sites examined. Finally, court delay from arrest to post-indictment disposition (about 224 days) was greater in New Orleans, Los Angeles, and Indianapolis, but less than in Detroit, Cobb County, and Rhode Island.[10]

CASE FLOWS IN SUPERIOR COURT

Every student of criminal justice is aware that an arrest is unlikely to result in a trial. In fact, more arrests are unlikely to lead to formal prosecution. Case dispositions are illustrated with more detail in Figure 5, which maps the flow of defendants accused of four types of high-volume crimes through Superior Court. The four flows outlined show that the cases of only three out of four defendants survive the initial screening by the prosecutor's office. Of those cases that survive, less than half are prosecuted; others are nolled by the prosecutor or dismissed by the court for want of prosecution. Ultimately, 29 percent of the assault cases, 36 percent of the burglary cases, 33 percent of the larceny cases, and 38 percent of the robbery cases either go to trial or are terminated by a guilty plea. Roughly, then, only one in three suspects faces the *prospect* of conviction and incarceration; fewer than this are actually incarcerated.

It is interesting to note that, of the cases that are prosecuted, guilty pleas predominate. Just over one in three assault prosecutions results in a trial. Fewer than one of three individuals accused of robbery, larceny, or burglary goes to trial. Thus, as expected, out-of-court settlements dominate the processing of cases in the District of Columbia courts.

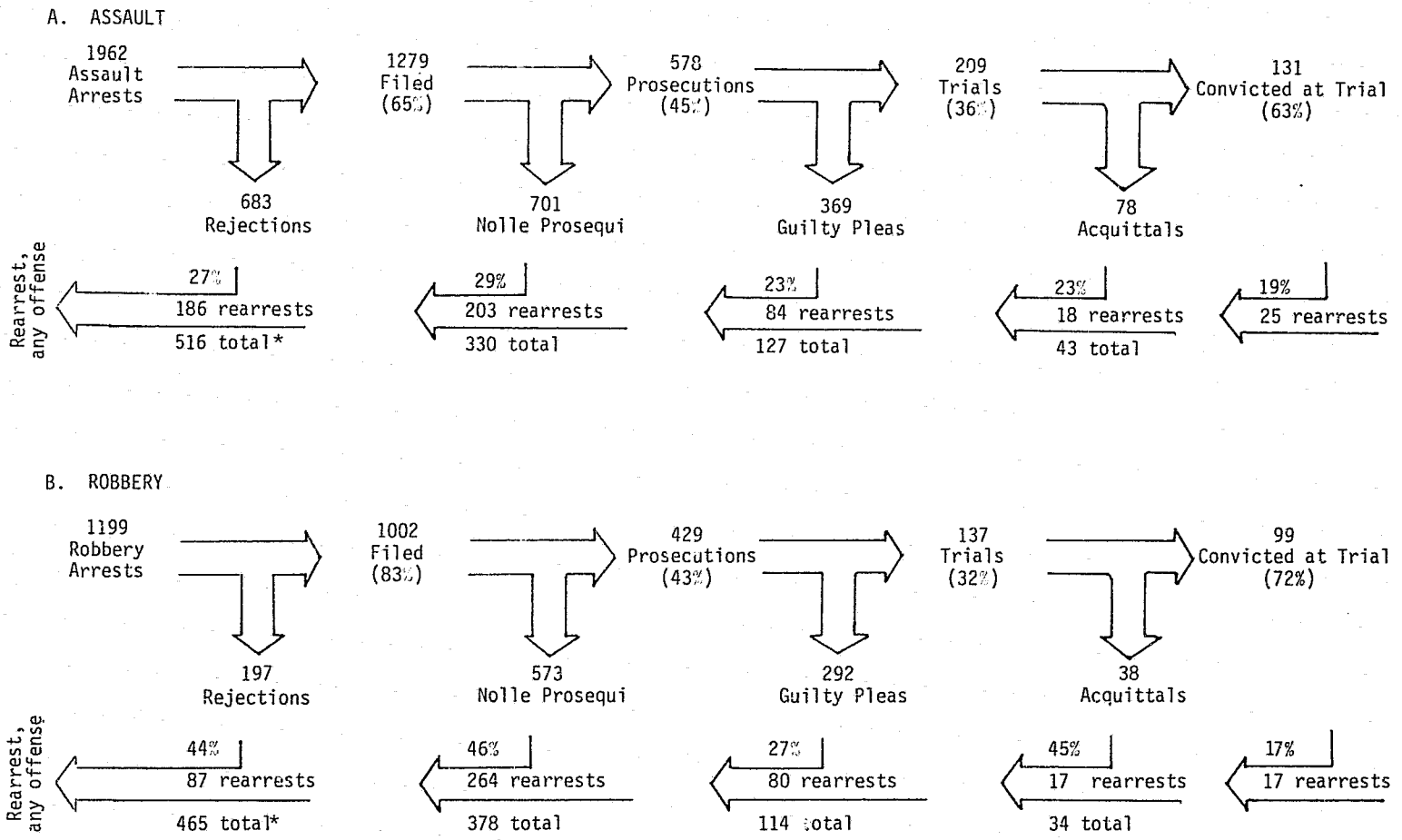
It is also interesting to note that a large number of individuals who were arrested in 1974 were rearrested within two years of their disposition. Recidivism rates ranged from a low of 26 percent for individuals accused of assault to a high of 40 percent for individuals accused of burglary. The rates appear to differ by type of previous handling in the criminal justice system (e.g., robbery suspects convicted at trial recidivate less frequently than robbery suspects acquitted at trial), but the explanation for the patterns detected is somewhat complex and is deferred until the next chapter.

These apparently high rates of recidivism persist despite the fact that at least some offenders are incapacitated by prison terms and others are under the supervision of probation authorities. Of those persons convicted, the proportion receiving a jail or prison sentence varies by offense. About one of three assault and larceny defendants receives a sentence of imprisonment following conviction. The proportion jumps to nearly one-half for those individuals convicted of burglary and to more than two-thirds for persons convicted of robbery.

It can be noted, then, that most cases are terminated out of court and do not result in conviction. Most of these are nol prossed. Of those cases that end in conviction, a guilty plea is more likely than a trial. Fewer than half of the convicted felons serve prison terms. In addition, there is a considerable amount of recidivism.

With this background in mind, it is possible to analyze these four case flows in greater detail. In the next chapter, interest centers first on the characteristics of

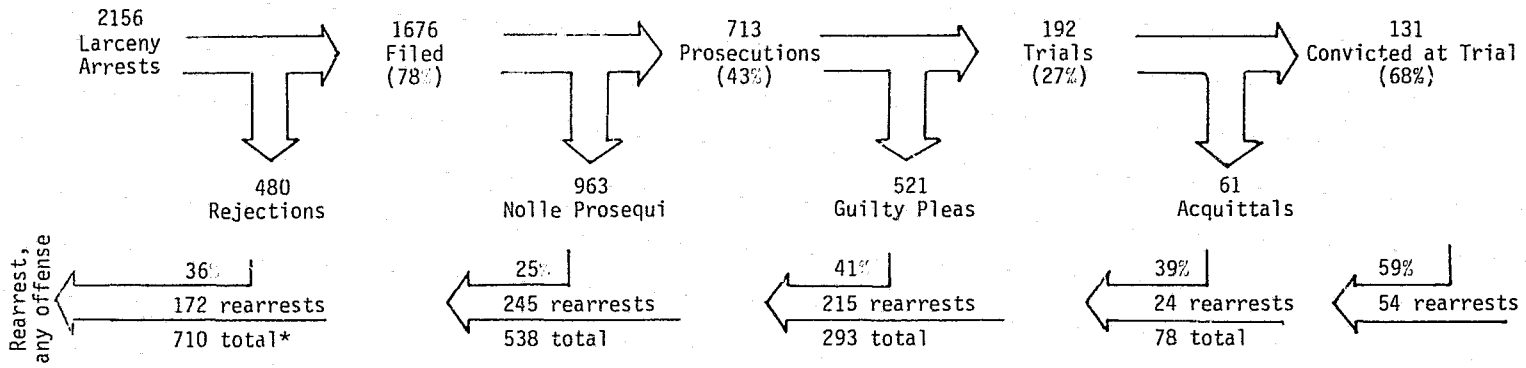
Figure 5.
Dispositions (1974) and Rearrest of Defendants, 1974–1976



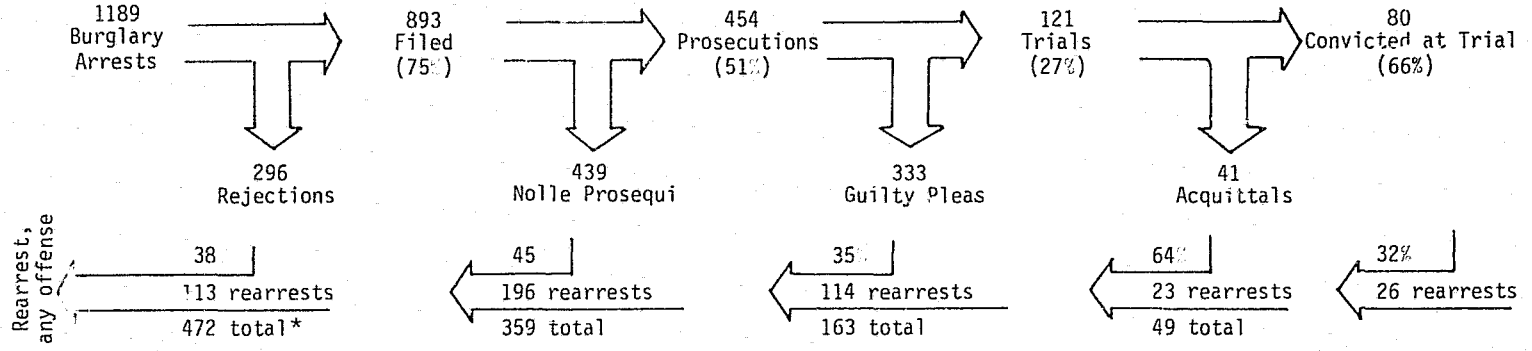
* Cumulative total of rearrests.

Figure 5. (continued)

C. LARCENY



D. BURGLARY



Note: For a discussion of how these data were constructed, see the discussion of "Recidivism" in the technical appendix.
*Cumulative total of rearrests.

cases that follow each path in the flow diagram. More specifically, we determine the probability of conviction and likely sentence that would be received if a typical case were to go to trial rather than being dismissed or terminated with a guilty plea. As discussed earlier, this determination allows us to assess part of what is gained and lost by the prosecutor, defendant, and the public through current methods of case disposition. Then interest turns to the prosecutor's explanation of why cases follow the perceived paths. Finally, attention shifts to using observations about case disposition, and the prosecutors' reasons for dismissals and pleas, to explain observed patterns of recidivism.

Notes

1. U.S. Department of Justice, Law Enforcement Assistance Administration, *Criminal Victimization Surveys in Washington, D.C.* (Washington, D.C.: Government Printing Office, 1977).

2. Donald J. Black, "Production of Crime Rates," *American Sociological Review* 35 (1970): 733, and "The Social Organization of Arrest," *Stanford Law Review* 23 (1971): 1087.

3. Donald J. Black, "The Mobilization of Law," *The Journal of Legal Studies* 2, no. 1 (January 1973); Albert J. Reiss, Jr., *The Police and the Public* (New Haven: Yale University Press, 1971); Albert J. Reiss, Jr., and David Bordua, "Environment and Organization: A Perspective on the Police," in *The Police: Six Sociological Essays* (New York: John Wiley and Sons, 1967); Donald Black, *The Behavior of Law* (New York: Academic Press, Inc., 1976).

4. Reiss, *The Police and the Public*, p. 73.

5. Brian Forst, Judith Lucianovic, and Sarah J. Cox, *What Happens After Arrest? A Court Perspective of Police Operations in the District of Columbia*, PROMIS Research Publication no. 4 (Washington, D.C.: INSLAW, 1977).

6. Minor misdemeanors, municipal ordinance infractions, and certain traffic-related offenses are prosecuted by the Corporation Counsel, a local appointee. He also prosecutes juveniles, except 16- and 17-year olds the U.S. Attorney chooses to prosecute as adults.

7. When a screening prosecutor rejects a case at screening, he may be indicating that the police have failed to collect sufficient evidence to justify prosecution. Frequently, however, rejection at this stage appears to be a matter of "settling" conflicts that are not amenable to criminal procedure. In this latter regard, neither the due process nor the crime control model is appropriate; rather, the decision frequently seems to reflect what Griffiths has called the "Family Model," in which conflicts are resolved without the determination of guilt or innocence. John Griffiths, "Ideology in the Criminal Procedure or a 'Third' Model of the Criminal Process," *The Yale Law Journal* 79, no. 3 (January 1970): 359–417. Kristen M. Williams reports that cases in which the victim provoked or participated in the criminal event, and cases in which there was a close social relationship between the victim and defendant, are more frequently rejected at screening. *The Role of the Victim in the Prosecution of Violent Crimes*, PROMIS Research Publication no. 12 (INSLAW, forthcoming).

8. Newman coined the term "explicit bargaining" for guilty pleas that followed promises of sentence concession either from the prosecutor or from a judge. Implicit bargains were those in which the *expectation* of a sentence reduction, rather than an explicit promise, led to the plea. Donald J. Newman, *Conviction: The Determination of Guilt or Innocence Without Trial* (Boston: Little, Brown and Company, 1966).

9. "Experienced defense lawyers admit that they frequently manipulate the system for misdemeanor cases by seeking continuances until their clients can plead guilty before a so-called soft judge. The process is commonly known as 'judge shopping'." David Pike and Tom Crosby, "Criminals 'Shop Around' in District Court for the Soft Judges," *Washington Star*, January 10, 1978.

10. Kathleen B. Brosi, *A Cross-city Comparison of Felony Case Processing*, in draft (INSLAW, forthcoming). Some relevant findings can be summarized. *Rejection rates at screening:* Cobb County (20%), Milwaukee (17%), Salt Lake (20%), D.C. (22%), New Orleans (57%), Los Angeles (64%). (Both New Orleans and Los Angeles refer a substantial number of felony cases for other prosecution.) The *total dropout rate* (including nolled and dismissed cases): Cobb County (31%), Milwaukee (40%), Salt Lake (45%), D.C. (49%), New Orleans (48%), and Los Angeles (76%). *Trials* as a percentage of filed felony cases: Cobb County (2%), Rhode Island (3%), Golden (4%), Milwaukee (7%), Kalamazoo (10%), D.C. (11%), Los Angeles (13%), Florida Second Circuit (14%), Detroit (14%), Louisville (16%), Indianapolis (21%), and New Orleans (21%). The percentage of convictions that were *pleas*: Florida Second Circuit (68%), Indianapolis (75%), New Orleans (82%), Los Angeles (83%), Louisville (86%), D.C. (87%), Detroit (88%), Kalamazoo (90%), Milwaukee (90%), and Cobb County (100%).

4

Who Gains and Who Loses From Plea Bargaining?

Who gains and who loses from plea bargaining? In this chapter, we attempt to answer this question from the perspective of the prosecutor, the defendant, and the public. First, sentencing is examined to determine the effect of plea bargaining on the probability of probation or prison following conviction. The examination then turns to estimating the probability of conviction at trial and to determining the likelihood that an individual who actually pled guilty would have been convicted had he really gone to trial. Finally, the consequences of plea bargaining, in terms of recidivism and future criminal justice processing, are considered.

SENTENCING IN THE CRIMINAL COURTS

Legal and extralegal factors influence the sentence received by defendants convicted at trial. Some of these factors (e.g., a defendant's demeanor) are difficult to quantify; others (e.g., employment status) are sometimes incompletely or inaccurately reported in the data base. Despite these limitations, there remain detectable patterns of variables that are correlated with sentence severity, and those factors are used here to explain sentencing in the criminal courts.

The detectable patterns were reduced to three sets. First, some researchers have found that a defendant's personal characteristics affect his sentence; thus, age, sex, and release on own recognizance (as a measure of established community ties) were included in the analysis.[1] In addition to personal characteristics, specific attributes of the offense were considered as a second set of potential factors influencing the sentence imposed: the amount of damage to property and the amount of injury to persons were assessed; also, the presence of a gun at the time of arrest was noted, as was the number of charges included in the indictment. Third, the defendant's arrest record was believed likely to be a determinant of the sentence imposed. To take this into account, the number of previous arrests for crimes against property and the number of previous arrests for crimes against the person were included in the analysis. Using data pertaining to suspects *convicted at trial,* regression analyses were conducted for each of four crime categories: assault, robbery, larceny, and burglary. Complete regression results are provided in the technical appendix; conclusions are sketched below.

Our findings generally conformed to our expectations and were generally consistent with the findings reported by other researchers in different settings.[2] Although corresponding results reported in the PROMIS research report on sentencing practices were based on a somewhat different model, and used similar but not

identical data, findings based on the regression analyses conducted for this study are in close substantive agreement with those reported in the sentencing study.[3] A reader interested in a detailed discussion of sentencing practices should refer to that report, as well as to the technical appendix to this study. In this chapter, the discussion is limited to highlights of the regression findings.

With respect to personal characteristics, males tended to receive more severe sanctions than females for the same type of offense, but an effect attributable to age was difficult to discern.[4] As was expected, individuals who were released on personal recognizance (ROR) prior to trial were sentenced more leniently, a finding consistent with the belief that ROR clients have more-established community ties and, as a consequence, make better probation risks.[5]

Considering crime characteristics, the seriousness of the harm done to the victim was an important factor in explaining sentences following convictions for assault and for burglary. Likewise, the value of property lost was important for robbery, larceny, and burglary—and, to a degree, for assault. Possession of a gun increased the sentence in assault and burglary cases (a weapon was infrequently associated with larceny and did not seem to matter when present in robbery cases). Examining criminal records, previous arrests increased the probability that a defendant would be sentenced to prison rather than to probation. Finally, sentence leniency was inversely related to the number of counts in the indictment for robbery and burglary.

More importantly, this model significantly improved our ability to explain the sentence received following conviction at trial. Using these results, we can accurately predict the sentence received in assault cases 76 percent of the time, in robbery cases 46 percent of the time, in larceny cases 69 percent of the time, and in burglary cases 56 percent of the time.[6] In contrast, if we were to guess at the sentences received, the percentage of times that we would expect to be correct ranges from a high of 64 percent for assault to a low of 27 percent for robbery.[7]

Results from the regression analyses "make sense" and lend confidence to the belief that the model can predict sentences received following trial. Of course, the main purpose of this exercise was not, in fact, to predict the sentences of defendants convicted at trial. Rather, our primary interest was to predict the sentence that would have been received by defendants actually entering a guilty plea, or actually having their cases terminated in a dismissal, if they had in fact been convicted at trial. These predictions are reported and discussed in the next section, where they are compared with the sentences actually received.

PREDICTED SENTENCES FOR DEFENDANTS CONVICTED BY PLEA OR DISMISSED

In this section, sentences received by defendants who entered guilty pleas are compared with sentences received by individuals convicted at trial. It was argued earlier that a simple comparison would be misleading if suspects entering guilty pleas differ from those going to trial. To investigate the extent of this problem, factors shown previously to have an impact on sentencing were compared for persons convicted at trial and convicted by guilty plea. Although this comparison indicated little difference between these two groups, some notable contrasts were apparent, so regression estimates were also used. This analysis was then repeated for suspects whose cases were nolled by the prosecutor or dismissed by the court.

In Table 1, the characteristics of an offender and his offense are compared for individuals convicted at trial and persons convicted by guilty plea. While these comparisons reveal these two groups to be similar, some evident differences emerge. Note that persons pleading guilty following an arrest for assault had a

Table 1.
Comparison of Variables Important to Sentencing, by Type of Offense and Disposition (percentage, except age)

Variables Influencing Sentence Severity	Offense Alleged at Time of Arrest											
	ASSAULT			ROBBERY			LARCENY			BURGLARY		
	Plea	Trial	Dismiss	Plea	Trial	Dismiss	Plea	Trial	Dismiss	Plea	Trial	Dismiss
Release on recognizance	57%	49%	58%	29%	28%	34%	50%	50%	60%	35%	30%	47%
Male	90	89	85	96	96	93	87	90	74	96	96	94
Age	34	32	34	23	24	24	28	28	28	26	26	28
Gun	48	24	34	37	42	45	4	5	1	7	17	3
Injury to persons	70	77	80	20	15	22	1	1	1	5	8	6
Loss of property	10	11	10	69	63	75	78	75	77	67	53	60
Record: Previous arrests for crimes against persons												
None	73	76	72	66	59	62	71	68	83	69	71	71
One prior arrest	13	5	10	12	13	10	11	12	6	10	10	10
Two or more	14	19	18	22	28	28	18	20	11	21	19	19
Record: Previous arrests for crimes against property												
None	71	66	70	64	64	60	52	51	72	42	57	58
One prior arrest	8	15	9	10	10	10	8	6	8	7	9	7
Two or more	21	19	21	26	26	30	40	43	20	51	34	35
Number of observations	280	113	630	435	157	803	745	185	1225	554	123	627

Source: PROMIS. All variables are described in the technical appendix.

weapon in their possession much more frequently than those convicted at trial. In contrast, robbery suspects going to trial were somewhat more likely to have had a gun than robbery suspects who pled guilty. Likewise, the presence of a gun was more frequent for burglary cases leading to conviction at trial, and trial cases strongly indicated a lower incidence of property loss. There were no large differences between larceny cases going to trial and larceny cases settled by guilty plea. All in all, with the exception of "guns" in assault and burglary cases, and "loss of property" in burglary cases, there were few large differences between trial cases and guilty plea cases.

These findings indicate that simple comparisons between the sentence received following conviction at trial and following a guilty plea settlement would not necessarily result in misleading interpretations. To be sure (given the differences noted above), however, the sentence received following trial was also compared with a predicted sentence, based on the regression equations, had the defendant who pled guilty actually gone to trial. These comparisons are discussed next.

In the first column of Table 2, sentences are grouped into four categories of increasing severity: probation, incarceration under the Federal Youth Corrections Act (FYCA) or the Narcotics Rehabilitation Act (NARA), a minimum sentence of less than three years, and a minimum sentence of three years or more. Prison terms actually served correspond closely to the sentence minimum in the District

Table 2.
Observed and Predicted Sentences Following Conviction at Trial, Guilty Plea, and Nolle Prosequi: Proportion of Individuals Sentenced to Each of Four Sentences

Charge and Sentence Severity (1)	Sentence Imposed: Following Conviction at Trial actual (2)	Following Conviction by Plea act. (3a)	Following Conviction by Plea exp. (3b)	Following Nolle Prosequi exp. (4)	Number of Trials to Guilty Pleas (5)
Assault					113/280
Probation	78%	80%	77%	77%	
FYCA/NARA[a]					
Minimum <3 yrs.	18	18	20	18	
Minimum >3 yrs.	4	2	2	5	
Robbery					157/435
Probation	25	43	24	30	
FYCA/NARA	19	21	21	24	
Minimum <3 yrs.	21	23	22	22	
Minimum >3 yrs.	35	14	32	25	
Larceny					185/745
Probation	69	70	67	75	
FYCA/NARA	6	4	7	6	
Minimum <3 yrs.	25	26	27	19	
Minimum >3 yrs.[a]					
Burglary					123/554
Probation	50	53	51	61	
FYCA/NARA	14	15	14	14	
Minimum <3 yrs.	24	27	23	19	
Minimum >3 yrs.	12	5	11	6	

[a]Category merged with "minimum <3 yrs."

of Columbia. Thus, we expect the dependent variable to represent both the sentence and the actual term of incarceration.[8] The second column records the proportion of offenders convicted at trial who actually received a given type of sentence. Column 3(a) records a comparable measure for defendants convicted by plea. Finally, column 3(b) presents the sentence distribution that would be expected if the same guilty plea defendants had been convicted at trial, and the fourth column shows the corresponding expectation for persons whose cases were nolled by the prosecutor (or dismissed for lack of prosecution by a judge). Columns 3(b) and 4 were predicted from the regression equations.

Comparing colums 2 and 3(a) with column 3(b) leads to two conclusions. First, with respect to assault, larceny, and burglary, defendants who entered guilty pleas received sentences comparable to sentences they would have received had they been convicted at trial. For assault, 77 percent of the defendants were expected to receive probation; 80 percent actually received probation. For larceny, 67 percent were predicted to be placed on probation; 70 percent actually were. For burglary, we expected 51 percent of the defendants to receive probation; 53 percent did in fact. Based on these data, we conclude that prosecutors are not giving significant plea bargaining concessions and that judges are not rewarding guilty pleas with sentence leniency for these three offenses.

In contrast, plea bargaining concessions were apparent for robbery convictions. Using the regression equations, we predicted that 24 percent of those defendants who entered a guilty plea after being arrested for robbery would receive probation. In fact, 43 percent received probation. We also predicted that 32 percent of the robbery offenders would receive a prison sentence with a minimum length of three years or more. In fact, only 14 percent received such a severe sentence following a guilty plea. This is evidence that considerable bargaining is occurring for robbery cases and that, in general, a suspect can expect to fare better if he enters a guilty plea instead of being convicted at trial.[9]

Finally, we note the finding that suspects whose cases were nolled would have received somewhat lighter, but not radically different, sentences compared with their convicted counterparts. These findings are consistent with Table 1, which showed that for dismissed cases the elements of the offense and the characteristics of the accused offender were only somewhat less serious when compared with those cases resulting in convictions. Implications from these findings are drawn below.

Our failure to find significant plea bargaining concessions, with the exception of robbery cases, runs contrary to expectations.[10] As such, the findings beg explanation. However, this explanation will be deferred until later. Next, the analysis turns to predicting the probability of conviction at trial.

THE PROBABILITY OF CONVICTION AT TRIAL

In the previous two sections, regression analysis was used to *estimate* the probability of receiving different types of sentences if convicted at trial. These estimates were then used to *predict* the sentence that would have been received by those defendants actually pleading guilty if they had in fact gone to trial. Here, the probability of being convicted at trial is estimated using the availability of physical evidence, the number of lay witnesses, whether the defendant was arrested at the scene of the offense, whether the defendant was arrested within one day of the offense, the number of charges, and the defendant's pretrial release status as explanatory variables. Results from the regression equations are reported in the technical appendix and summarized below.

In general, we found the following:

(1) The availability of physical evidence appeared to influence the likelihood of conviction for robbery and burglary—although physical evidence appeared to reduce the probability of conviction for burglary.

(2) The number of charges appeared important for assault, and marginally important for larceny and burglary.

(3) Being arrested at the scene of the offense appeared to matter in assault cases and, perhaps, in larceny cases.

(4) Being released on recognizance was found to be important in burglary cases and robbery; its effect was more marginal for assault.

(5) Being arrested within one day of the offense appeared important for assault but not for the other offenses.

(6) The availability of witnesses appeared important for robbery and burglary—although witnesses decreased the probability of conviction for burglary.

(7) The probability of conviction increased if there was evidence corroborating that an offense had been committed. For burglary, the existence of exculpatory evidence was important in reducing the probability of conviction.[11]

Unfortunately, the regressions did not "fit" the data as well as the previous regressions on sentences. Still, using the regression results to predict the probability of conviction increased the proportion of correct predictions (relative to chance) from 54 percent to 68 percent for assault, from 65 percent to 79 percent for robbery, from 56 percent to 70 percent for larceny, and from 55 percent to 67 percent for burglary.

A second estimate of the probability of conviction was also used. In 1974, screening prosecutors in the District of Columbia were asked to estimate the probability of winning each criminal case. Acceptable responses were limited to poor (under 50 percent), fair (50-75 percent), good (75-90 percent), and excellent (90-100 percent). Ostensibly, these estimates appear superior to the regression estimates. Prosecutors have access to qualitative information not contained in the data base, and they are able to measure important quantifiable determinants of conviction more accurately than these can be recorded in PROMIS. However, statistical analysis revealed that the screening prosecutor's estimate of winning a case was *not* correlated with the observed probability of conviction based on cases that went to trial. Therefore, there is little solace in using the prosecutor's estimate in lieu of "good" regression predictions.

These findings have interesting implications. Once cases have been accepted for prosecution, it is difficult to predict whether they will lead to a conviction at trial. Perhaps this can be attributed to the vagaries of judges and (primarily) juries; perhaps the *quality* of evidence (especially witness testimony) cannot be accurately assessed until the time of the trial; or maybe the variables (or their measurement) used in this analysis fail to capture what is important in convincing a judge-jury of guilt.[12] Having alluded to some explanations, a more complete attempt at explication will be offered later.

ESTIMATED PROBABILITIES OF CONVICTION AT TRIAL: CASES TERMINATED BY GUILTY PLEA OR DISMISSAL

In the previous section, we drew inferences from two estimates of the probability of conviction at trial. The first estimate was derived from a regression equa-

tion. The second estimate was based on the screening prosecutor's subjective assessment of the probability of winning the case. In this section, those estimates are used to predict the probability of conviction at a hypothetical trial (a) for defendants entering a guilty plea and (b) for defendants whose cases were nolled or dismissed for lack of prosecution.

Table 3 shows that when trials are compared with pleas, differences emerge in the factors associated with the probability of conviction. Most notably, physical evidence is consistently more likely to be available in those cases resulting in a guilty plea, and the number of witnesses tends to be higher for pleas (assault and robbery) than for trials. Beyond these two dominant factors, assault and burglary defendants who entered a guilty plea rather than go to trial were somewhat more likely to have been arrested on the day of the offense.

Although these differences exist, they do not necessarily mean that defendants who entered guilty pleas would have been convicted had they gone to trial. On the contrary, statistical analysis reveals that guilty plea defendants appear to have, on the average, about as good a chance of acquittal as defendants who demand a trial. We turn to this issue next.

Table 4 consists of four rows pertaining to the four offenses examined (assault, robbery, larceny, and burglary). The first three columns pertain to cases terminated at trial. The next two columns correspond to cases terminated by a guilty plea. The final two columns pertain to cases ending with a nolle or dismissal for lack of prosecution.

The column labeled "A" reports the observed probability of conviction at trial for each type of offense. Columns labeled "B" report the estimated probabilities of conviction at trial, based on the regression results. Likewise, columns labeled "C" report estimates based on the prosecutor's assessment of the case. Several patterns are detected upon examination of this table.

It is evident that, on average, the screening prosecutor tends to overestimate the probability of conviction, at least for cases that go to trial. Robbery is the exception; for these cases the prosecutor tended to underestimate the true probability of conviction at trial. As would be expected, the regression equations were quite accurate in predicting the *proportion* of trials that resulted in conviction.

For present purposes, the most interesting findings appear in the columns "By Plea" and "Nolle/Dismissal." The plea column indicates that if defendants went to trial rather than entering guilty pleas, they would be convicted at about the same rate as those actually going to trial.

To illustrate, we predict that 66 percent of the defendants who plead guilty in assault cases would be convicted if tried; the actual rate of conviction for assault cases at trial was 65 percent. For robbery, 84 percent of the guilty plea cases would likely result in conviction at trial; 78 percent of all robbery cases actually going to trial resulted in conviction. Looking at larceny, we predict that 69 percent of the guilty plea cases would result in conviction at trial; actually 66 percent of all larceny cases tried resulted in conviction. Finally, we predict that 68 percent of the burglary cases terminated with a guilty plea would have resulted in conviction at trial; 67 percent of those cases going to trial did, in fact, result in conviction.

An interesting implication emerges: *Were it not for the significant number of guilty pleas, a large number of criminal cases would not result in conviction simply because trial outcomes are uncertain.* If all guilty plea cases went to trial, then the percentage of prosecutions leading to conviction would fall from 87 percent to 66 percent (assault), 93 percent to 82 percent (robbery), 91 percent to 68 percent (larceny), and 92 percent to 68 percent (burglary).[13] Additionally, a larger number of trials would be expected to reduce the rate of prosecutions, further limiting the number of convictions.

Table 3.
Comparison of Conviction Factors (Trial, Plea, and Dismissal)

Variables Influencing the Probability of Conviction at Trial	Offense Alleged at Time of Arrest											
	ASSAULT			ROBBERY			LARCENY			BURGLARY		
	Trial	Plea	Dismiss	Trial	Plea	Dismiss	Trial	Plea	Dismiss	Trial	Plea	Dismiss
Arrested same day as offense	81%	85%	82%	67%	72%	55%	89%	90%	86%	75%	80%	76%
Physical evidence available	32	50	38	54	65	42	90	94	90	43	59	38
Number of charges												
1	30	20	52	24	28	73	44	44	57	26	18	34
2	29	25	23	11	11	15	46	38	36	24	24	24
3	21	28	16	22	16	6	7	10	5	18	26	8
4	14	14	6	13	13	2	1	4	2	12	14	3
5+	6	13	3	30	32	4	2	4	1	20	18	2
Number of lay witnesses												
0	10	10	11	5	5	4	26	34	35	10	10	12
1	33	23	35	45	36	44	45	38	38	40	39	41
2+	57	67	54	50	59	52	29	28	23	50	51	47
Release on recognizance	55	59	56	32	31	36	50	49	61	39	36	48
Third-party release	11	11	8	17	20	18	7	8	7	19	14	13
Prosecutor's estimate of the probability of conviction												
under 50%	12	7	13	5	4	10	10	6	11	6	4	9
50–75%	37	32	37	38	34	39	29	26	30	28	31	38
75–90%	42	52	43	42	43	41	52	52	46	54	49	42
90–100%	9	8	7	15	19	9	9	17	12	12	16	10
Number of observations	237	404	806	185	336	653	270	715	1117	177	534	610

Source: PROMIS. All variables are described in the technical appendix.

Table 4.
Probability of Conviction: Actual and Predicted

Charge	At Trial			By Plea		Nolle/Dismissal	
	A	B	C	B	C	B	C
Assault	65%	66%	69%	66%	71%	59%	68%
Robbery	78	79	71	84	73	78	67
Larceny	66	68	73	69	74	67	71
Burglary	67	67	73	68	74	64	70

Key:

A Observed probability of conviction at trial = number of convictions/total number of trials.

B Predicted probability of conviction had this case gone to trial, based on the regression equations reported in Table 1.

C Predicted probability of conviction, based on the prosecutor's estimate of the strength of the case at screening.

Number of cases analyzed: trials/pleas/dismissals—

Assault	246/404/806
Robbery	185/336/653
Larceny	275/750/1166
Burglary	177/534/610

These findings have two implications. First, coupled with the finding that (with the exception of robbery) sentencing concessions in exchange for guilty pleas are not pervasive, it is curious why more defendants do not go to trial. It would appear to be in their interest to do so (most have appointed counsel, so the cost of a defense is unlikely to be a deterrent), since they are likely to receive an equivalent sanction if convicted, and yet they stand a good chance of being acquitted at trial. Second, this evidence seems to contradict an often-made assertion that cases in which guilt is contested will go to trial. If the initial screening prosecutor's estimate of the probability of conviction and the record of evidence stored in PROMIS can be taken as indicators, then while the factually guilty may be convicted by guilty pleas, guilty plea convictions may frequently result in conviction of the legally innocent, i.e., persons who would not be adjudged guilty at trial.

Interesting implications are not limited to hypothetical trial outcomes for those defendants entering guilty pleas. Note also that the last two columns of Table 4 lead to the conclusion that nolled cases and cases dismissed for want of prosecution would frequently result in conviction if taken to trial. This statement will be qualified in the next section; for the present it should be noted that these cases include evidence pointing toward convictability—sufficient evidence apparently that the screening prosecutor initially estimated the probability of winning these cases as comparable to that for cases that are later prosecuted.

These findings have implications for the quality of justice received in the criminal courts. It has been shown that a plea bargain is not necessarily a bargain to the defendant. And if the screening prosecutor's estimate of convictability and the record of evidence stored in PROMIS are indicative, then many arrestees whose cases are dismissed are likely to be factually guilty.

Next, the analysis investigates the reasons behind plea bargains and the reasons for dismissals, as provided by the Assistant U.S. Attorneys responsible for the cases. This information helps to explain the pattern of dispositions observed in the previous section.

EXPLANATIONS OF PLEA AND DISMISSAL DISPOSITIONS

The preceding sections reported findings that (1) guilty pleas were unlikely to lead to sentence concessions, except for robbery, and (2) that many defendants who had their cases dismissed were likely to be factually guilty. Examination of the prosecutors' description of these dispositions affords additional insight into these findings.

Table 5 reports the frequency with which the prosecutors cite a series of standard descriptions of guilty pleas. It is interesting to note that assault and larceny cases are frequently pled "as charged." Indeed, even if Alford pleas, nolles in exchange for pleas of guilty to other charges in the same case, and nolles in exchange for guilty pleas in other cases are considered to reflect charge reductions, then 80 percent of the assault pleas and 90 percent of the larceny pleas are to the top (most serious) charge.[14] Since charge reduction is the primary method of plea bargaining in the District of Columbia, it is not surprising to have discovered that sentence concessions infrequently result for assault and larceny cases.

In contrast, robbery suspects enter guilty pleas to the top charge 56 percent of the time, a frequency that corresponds to the high rate of sentence concessions awarded to persons who pled guilty following an arrest for robbery. However, individuals charged with burglary pled to the top charge 63 percent of the time—but no sentencing concessions were apparent. Thus, sentencing patterns are consistent with dispositions for assault, robbery, and larceny, but burglary appears as an anomaly. In the latter cases, defendants enter pleas to lesser offenses, but no apparent sentencing concessions result.

Having found that a guilty plea does not necessarily result in a charge reduction, and that a charge reduction need not lead to a sentence concession, the question remains: Why do defendants enter guilty pleas in the Superior Court of the District of Columbia? Defendants who plead guilty following an arrest for robbery receive sentence concessions. This would seem to explain, in part, their motivations to forego a trial. However, defendants accused of assault, larceny, and burglary are about as likely as robbery defendants to enter guilty pleas, although the former offenses infrequently result in sentence reductions. Clearly, explanations have to be sought beyond the incentive to seek leniency in exchange for "considerations."

Table 5.
Descriptions Given by the Prosecuting Attorney of Guilty Plea Dispositions (percentage)

Disposition	Type of Offense			
	ASSAULT	ROBBERY	LARCENY	BURGLARY
As charged	80%	56%	90%	63%
To lesser offense	11	26	5	18
Nolle/other case[a]	1	0	1	0
Nolle/this case[b]	6	16	4	19
Alford	2	3	0	0

Source: PROMIS.

Note: Number of cases examined: assault (432), robbery (463), larceny (797), and burglary (597).

[a]Defendant pled guilty in exchange for the prosecutor's agreement to dismiss a second pending case.

[b]Defendant pled guilty in exchange for the prosecutor's agreement to dismiss one or more counts of the present indictment.

Unfortunately, direct evidence supportive of other explanations is unavailable. It is possible that attorneys and judges are simply unaware of the actual outcomes of guilty pleas, and act as if pleas routinely result in sentence concessions. When these findings were shown to local prosecutors and judges, they generally expressed surprise. One Superior Court judge remarked in a private communication:

> The great tragedy is that because we judges are kept in virtual ignorance . . . about what we do that what you find occurs. I feel confident that judges do believe they give reductions for pleas. I think I do, yet we get no information from the court . . . We don't live up to our plea bargains because we don't know what they are. Dealing with dozens of cases, it cannot be kept track of in a small office.

The director of the Public Defender Services commented:

> If the defense attorney is doing his job right, there shouldn't be many mistakes made where a defendant who would cop a plea would have had much of a chance of being found guilty had he gone to trial. If there is any serious question of innocence, we are certainly going to go to trial . . . [there is a] general expectation that the defendant who plea bargains is getting a break for both expressing his culpability and for saving the court system's time and money.

The prevailing belief among court participants seems to be that sentence concessions do follow guilty pleas.

Still, lack of knowledge of existing sentencing patterns does not explain the patterns detected. Perhaps the simplest explanation is that in many cases a prison or jail sentence is unlikely to occur no matter how a defendant is convicted. Even when convicted by a jury, almost four of every five defendants accused of assault and nearly seven of every ten defendants accused of larceny received probation. When a jail sentence does result from conviction, it is likely to be for a short period. Given these conditions, a majority of defendants may feel that neither a trial nor active negotiations with the prosecutor is necessary. And a defense attorney may best serve his client's interest by facilitating his plea of guilty.

Rosett and Cressey emphasize plea bargaining as a method of "settling disputes," a view that is consistent with the infrequency of prison sentences for assault and larceny cases.[15] From the case settling perspective, it is reasonable to believe that "routine" cases have little to be contested, especially if both the defense and the prosecution believe in the defendant's guilt. Solutions to conflicts are sought in what is believed to be an appropriate settlement given the nature of the offense. Robbery, burglary, assault, and larceny are high-volume offenses, so there is ample opportunity for "rules of thumb" to arise, especially since senior Assistant U.S. Attorneys supervise plea negotiations. Since probation frequently follows conviction at trial, guilty plea dispositions are to be expected. When more difficult cases appear (in particular, those that might result in jail stays), there may be less pressure to concede with a bargain.

Other researchers have pointed out that trials are disruptive, not only for judges and prosecutors, but also for defense counsel. A defendant is typically incapable of determining whether he receives a bargain. Given the high incidence of probation, the prosecutor's willingness to award charge reductions (which do not necessarily lead to sentence concessions), and the actual award of sentence reductions in robbery cases, it is easy to see how a plea bargaining "myth" is preserved for non-robbery offenses. From the organizational viewpoint, a high volume of guilty pleas preserves organizational equilibrium at the same time that it appears to serve the defendant's interests. As a result, the plea bargaining "myth" promotes the smooth operation of criminal justice.

Finally, it should be noted that the statistical analysis that forms the basis for findings reported here captures only routine case handling. It may be that plea bargaining is more important in atypical cases, and that in those cases, sentence concessions do occur. Furthermore, it is reasonable to expect that these atypical cases are the most highly publicized—among offenders, through shop-talk, and through the media—and eventually come to characterize what is believed to be typical in the criminal justice process. Whatever the explanation, sentencing concessions in exchange for guilty pleas do not appear to be pervasive in the D.C. Superior Court.

Temporarily leaving descriptions of plea bargaining, and turning to reasons given for dismissing criminal cases, Table 6 shows that reasons for these dispositions vary considerably across categories. Correcting for the category "unknown," it is possible to determine why cases were dismissed by the prosecutor despite an initial estimate that the defendant was likely to be factually guilty and stood a good chance of being convicted.[16]

First, the large proportions of dismissed cases reported in Figures 4 and 5 are somewhat misleading. Approximately 10 percent of all dismissals were part of a plea bargain, primarily in exchange for a plea to another charge in the same case. Ultimately, then, defendants in this category are convicted and sentenced for at least some offense. Similarly, over half of the larceny filings, almost 20 percent of the burglary filings, and 6 percent of the assault filings were assigned primarily to

Table 6.
Reasons Given by the Prosecuting Attorney for Nolles and Dismissals, Corrected for the Category "Unknown"[a]
(percentage)

Reason Given by Prosecutor	Type of Offense			
	ASSAULT	ROBBERY	LARCENY	BURGLARY
Evidence problems[b]	10%	31%	10%	16%
Witness problems[c]	59	27	21	31
Due process	0	0	1	0
Bookkeeping[d]	6	10	3	10
Lacks merit[e]	12	31	5	16
Diversion[f]	6	0	51	16
Guilty plea[g]	6	2	17	7

Source: PROMIS.

Note: Number of cases examined: assault (781), robbery (662), larceny (1,154), and burglary (577), excluding cases in which the reasons for dismissals were not known.

[a]The reason for lack of prosecution was frequently unknown: assault (32%), robbery (38%), larceny (27%), and burglary (39%).

[b]The most frequently cited "evidence problems" were (1) analysis report unavailable, (2) analytic results insufficient to prove offense, and (3) physical evidence unavailable to prove offense.

[c]The most frequent explanations of "witness problems" were (1) complaining witness did not appear or was unfit for trial, (2) unable to locate complaining witness, and (3) police officer failed to appear or was unavailable.

[d]"Bookkeeping" most frequently refers to (1) charge mooted by verdict of the most serious offense and (2) charge to be picked up by the grand jury.

[e]The dominant explanation for "lacks prosecutive merit" was that the offense was trivial or insignificant.

[f]Diversion was primarily to Project Crossroads or the First Offender Treatment program.

[g]When "plea bargain" was given as an explanation for dismissals, it generally meant that the defendant pled to another charge in the current case in exchange for a nolle of this charge.

one of two diversion programs existing in the District of Columbia. To the extent that diversion is considered to be an appropriate form of disposition, these offenders are not "escaping" the system scot-free. In addition, a significant proportion of criminal cases lack prosecutory merit because of the trivial or insignificant nature of the offense. As shown in Table 6, 31 percent of the robbery filings, over 10 percent of the assault filings, and almost 20 percent of the burglary filings lacked merit. When the statistics are corrected to account for plea bargaining, diversion, and cases that lack prosecutory merit, the proportion of nolles and dismissals attributed to problems with the case, witness or evidence problems, or due process concerns falls markedly to 69 percent for assault, 58 percent for robbery, 32 percent for larceny, and 47 percent for burglary. These final figures provide a better estimate of the number of defendants who appear likely to be guilty but who manage to largely escape the judicial process.

These numbers, however, still overstate the proportion of defendants who "escape" the criminal justice process. It is widely recognized that the prosecutor's charging responsibility is not limited to selecting cases with a high probability of conviction. He must also consider the appropriateness of the criminal process in managing conflicts that result in arrests.

Assistant U.S. Attorneys meet this responsibility by selectively filing criminal cases.[17] In another of the PROMIS Research reports, for example, Kristen Williams found that cases in which the victim provoked or participated in the criminal event were more likely to be dropped at screening, a policy choice that appears to reflect the defendant's diminished responsibility or the victim's lack of deservedness in such cases. In cases of aggravated assault, sexual assault, and robbery, victims who were chronic alcohol abusers were more likely to have their cases rejected at screening—either because they were seen as potential witness problems, or because the crime was ambiguous, or because they were seen as less deserving. Also, the social relationship between the victim and the defendant frequently made a difference in case processing, perhaps because witness problems were more likely to occur, or because the criminal process was seen as inappropriate in handling what were essentially domestic relations problems.

Thus, in screening cases Assistant U.S. Attorneys recognize that criminal prosecution is frequently inappropriate in settling disputes. First, conviction may be unlikely either because the witness is not reputable or is unlikely to testify. Second, many ostensible crimes are actually domestic disputes, often involving family, friends, or lovers, and are probably not suitable for resolution in the criminal courts.

Yet the fact remains that from 32 to 69 percent of all nol prossed cases result from witness problems and difficulties with physical evidence, and a majority of these cases would likely *not* fall into the category "inappropriate for criminal prosecution," for several reasons. First, case screening occurs early when there are indications of victim provocation and participation, alcohol abuse by victims, and a reluctance to testify because of a close social relationship between the defendant and the witness. These factors have much less or no impact on dispositions once a case has been filed. Thus, since Table 6 lists reasons given for dismissing cases *following case filings*, other explanations must underlie these reasons.

Second, in his study of witness cooperation, Frank Cannavale concluded:

> . . . that communication difficulties between police/prosecutor and witness prevented prosecutors from ascertaining the true intentions of many witnesses. As a result, many witnesses were regarded as noncooperators when this was not necessarily their conscious choice. The impact on prosecutive effectiveness is obvious: many cases may have been rejected, dropped or dismissed when they could and should

> have been pursued, had communication problems not led prosecutors to misinterpret witnesses' intentions.[18]

In interviews with 215 persons labeled as noncooperative by prosecutors, 94 percent disagreed with the prosecutor's assessment and asserted that they were willing to testify.[19]

In part, witness problems seem to arise because police officers either fail to get the names of witnesses or inaccurately record addresses. But Cannavale also concluded:

> Failing to contact a witness in order to arrange an appearance at trial, the prosecutor's office leaves a telephone message, which is never passed on to the witness. Time constraints do not permit follow-up by the prosecuting attorney, and there is a scarcity of qualified support staff to do it. The witness fails to appear, which, in all likelihood, leaves the prosecutor little choice except to check as the reason for dropping the case "witness no show."[20]

These findings linking resource constraints to witness problems and dismissals are important to an assessment of plea bargaining, for two reasons. First, the actual availability of witnesses and physical evidence is less important to a guilty plea than it is to a trial; that is, a prosecutor who negotiates an out-of-court settlement need not worry that a crucial witness will fail to appear for trial. Second, to the extent that guilty pleas free prosecutory resources that otherwise would be devoted to trial preparation, it is possible to be more thorough in case preparation—including maintaining contact with witnesses and gathering physical evidence. Referring back to the model developed in Chapter 1, it is our expectation that the larger the number of guilty pleas, the smaller the number of dismissals.

This hydraulic model of prosecution receives additional support from the effect of a career criminal program, Operation Doorstop, initiated in August 1976 by the Metropolitan Police Department and the U.S. Attorney's Office for the District of Columbia. Prior to 1976, the fact that a defendant was a career criminal did not cause the prosecutor to devote special attention to his case, with the exception of serious crimes with marginal evidence.[21] After this experimental program was instituted, experienced prosecutors and police investigators were specially assigned to the cases of repeat, violent offenders when the defendant:

- was arrested for a crime of violence while on probation or parole for a felony, or
- was arrested for a felony while on probation or parole for a crime of violence, or
- was arrested for a crime of violence and possibly subject to pretrial detention.

Selection was made after case screening, and not all eligible cases were selected.

Four prosecutors are assigned to Operation Doorstop. One prosecutor is responsible for the case following screening through indictment; the second is responsible for trial and sentencing. In addition, six police officers are available for special investigations.[22]

It is not possible to conclude definitively that Operation Doorstop had an impact on case processing because of the selective nature of the program. Nevertheless, its apparent impact is consistent with expectations. Only 6 percent of the career criminal cases (148) were dismissed compared with 35 percent of all other felonies (2,441). Trials were also more likely to occur for career criminal cases (23 percent to 17 percent of all cases going to trial or entering a guilty plea), and trials were more likely to result in conviction (85 percent to 73 percent). Also, career criminal

cases required only half the court time that was required for other felonies (113 days to 235 days).[23]

Given that career criminals were not previously given special prosecutory consideration, these findings seem to indicate that many cases are dismissed, and others are disposed of by guilty pleas, partly because of resource constraints. Implications of the above findings and the presumption of an inverse relationship between guilty pleas and dismissals are discussed in the next section.

THE COSTS AND BENEFITS OF PLEA DISPOSITIONS IN THE D.C. COURTS

In this section, some cost and benefit implications are derived from the above findings. Conclusions are drawn with respect to the returns from (1) increasing the number of trials, (2) reducing sentencing concessions exchanged for guilty pleas, and (3) reducing the number of dismissals. Rough approximations are offered here; these conclusions will be somewhat modified in light of findings presented in the next chapter.

The importance of considering recidivism in this analysis is emphasized by findings reported in the PROMIS research report, *The Scope and Prediction of Recidivism.* In her analysis of recidivism in the District of Columbia, Kristen Williams pointed out that over a 56-month period "30 percent of the defendants were arrested two or more times, and they accounted for 56 percent of the arrests. Almost one-quarter of the arrests involved only 7 percent of the defendants."[24] Williams goes on to report: "Twenty-eight percent of the defendants had two or more accepted cases, and they accounted for 53 percent of all accepted cases."[25] Thus we see that the public incurs considerable costs from the subsequent criminal activity, rearrest, and reprocessing of individuals originally handled in the criminal courts, and the public interest demands that attention be paid to the effect the guilty plea process has on future crime.

The first cost considered is that associated with future crime. For present purposes, a record was made of whether a defendant was rearrested for a felony, for a misdemeanor, or was not rearrested within a period of two years subsequent to the disposition of the original charge. Table 7 reports our findings. In the table, the original disposition is classified into five categories: guilty plea, conviction at trial, acquittal at trial, nolle prosequi after filing, and not accepted for prosecution. The analysis was repeated four times, once each for the charges of assault, robbery, larceny, and burglary.

Different patterns emerge in these four tables, but these differences can be explained using the findings reported earlier. First, it is evident that persons convicted by guilty plea and persons convicted by trial recidivate at approximately the same rate. The one exception is that accused robbers who plead are more likely to recidivate than are robbers convicted at trial. These findings were expected, given what is now known about plea bargaining. Plea bargain sentence concessions were not awarded to defendants in assault, burglary, and larceny cases. Not surprising, then, for these offenders, the incapacitative-deterrent effect appeared to be identical no matter how these offenders were convicted. Sentencing concessions for plea bargains were awarded to robbery defendants. It is noteworthy that, for robbery, those convicted by guilty pleas were rearrested 27 percent of the time, while those convicted at trial were rearrested only 17 percent of the time. Moreover, guilty plea defendants in robbery cases were rearrested for felonies more than twice as frequently as those convicted at trial.[26]

Table 7.
1974 Dispositions and New Offenses in the Two Years Subsequent to the Initial Disposition (1974-1976)
(percentage)

Original Disposition	New Offenses		
	None	Misdemeanor	Felony
	ASSAULT[a] (N = 1,962)		
Plea	77%	11%	12%
Convicted at Trial	81	11	7
Acquitted at Trial	77	10	13
Nolle/Dismissal	71	14	15
No Filing	73	14	13
	ROBBERY (N = 1,199)		
Plea	73%	10%	18%
Convicted at Trial	83	10	7
Acquitted at Trial	55	24	21
Nolle/Dismissal	54	21	25
No Filing	56	20	24
	LARCENY (N = 2,156)		
Plea	59%	25%	16%
Convicted at Trial	59	25	16
Acquitted at Trial	61	13	26
Nolle/Dismissal	75	15	10
No Filing	64	22	14
	BURGLARY (N = 1,189)		
Plea	66%	15%	19%
Convicted at Trial	68	15	18
Acquitted at Trial	44	20	37
Nolle/Dismissal	55	19	26
No Filing	62	22	16

Source: PROMIS.
[a]Not statistically significant. All other crime categories significant at .01, using x^2 as a criterion.

It is important to be aware that these calculations compare a conviction by guilty plea with a *conviction* by trail. Next, it is necessary to consider defendants *acquitted* at trial. From earlier findings, it is evident that the probability of conviction at trial is uncertain. For robbery alone, only 78 percent of the defendants who went to trial were convicted; defendants accused of other offenses were convicted even *less* frequently. If an individual is acquitted at trial, he of course receives no sentence. This outcome leads to an interesting observation.

Turning again to Table 7, it is notable that accused robbers who were convicted at trial were rearrested only 17 percent of the time, but they were rearrested almost half the time (45 percent) if acquitted. With this calculation in mind (and recognizing that there is no one-to-one correspondence between an arrest and a crime), it is appropriate to reflect on the cost of a guilty plea versus acquittal in robbery cases. In terms of cost to the public, a guilty plea is just slightly more likely than a trial (with its attendant possibility of acquittal) to result in a future offense.[27] Therefore, the public does not seem to suffer from a plea bargain in a robbery case, although it must be noted that a guilty plea is somewhat more likely than a trial to result in an arrest for a felony. The savings are greater in burglary cases, for which plea bargaining concessions are insignificant; individuals acquit-

ted at trial are much more likely to recidivate than those convicted by plea or trial.[28] In contrast, no "future crime savings" arise for larceny and assaults, probably because convictions for these offenses frequently result in probation or an abbreviated prison term. Overall, it is reasonable to conclude that at worst the plea bargaining process (whether or not it involves a sentence concession) does not greatly increase crime, and—since sentencing concessions are infrequent—likely reduces crime in the District of Columbia.

The plea bargaining process appears not only to reduce acquittals, it may also reduce crime by reducing the number of cases dismissed. If proponents of plea bargaining are correct, a steady flow of convictions will result only if an expeditious method exists to dispose of criminal cases. Otherwise, many more cases would have to be dismissed.

Referring back to Table 7, we can learn what happens (in terms of future crime) following a dismissal. With the exception of larcenists, it is evident that recidivism is much higher for defendants who have their original cases nolled, relative to defendants who are convicted either by plea or trial verdict.[29] These estimates actually *understate* the importance of a conviction, for two reasons. First, between 5 and 10 percent of the dismissals are refiled and ultimately end in a conviction. Second, what appear to be dismissals (diversion and guilty plea) actually result in an individual coming under the control of correctional authorities. For these two reasons, the recidivism information understates the amount of crime that would be committed by persons who were dismissed.

Conservatively speaking, then, being dismissed increased the probability of a rearrest reaching Superior Court by over .20 for robbery, by less than .10 for assault, and by about .10 for burglary. If the rate of prosecutions is sensitive to the rate of guilty pleas, then it is apparent that future crime can be reduced by plea bargaining.

To this point, it has been shown that the plea bargaining process results in less crime for the community. For three charge categories, the guilty plea process reduced crime by eliminating the chance of acquittal at trial. In the fourth charge category (robbery), plea bargaining was discovered not to increase total crime substantially, although guilty plea defendants committed somewhat more serious offenses. Also, for three charge categories, it was found that plea bargaining had the potential to reduce crime if the number of prosecutions was thereby increased. Larceny was an exception; for these cases diversion appeared to be superior to formal prosecutions.

Other savings result from the guilty plea process. Trials are expensive; guilty pleas are relatively inexpensive. For the D.C. prosecutor's office, it is estimated that an average felony trial requires an additional 40 hours of attorney time at a cost of about $388. From a California study, a jury trial required 1,452 minutes on the average and cost over $3,000 relative to a guilty plea that lasted about fifteen minutes and cost about $215.[30] Clearly, a guilty plea saves the public considerable costs.

To the extent that current processing of criminal cases affects future criminal behavior, current processing determines future court costs. Looking at Table 8, it is evident that acquittal at trial and failure to prosecute increase the chances of having to process a case in the future. For robbery suspects, a dismissal was twice as likely to result in a future trial as was either a trial or guilty plea. The results are the same for assault cases and burglary cases: dismissal of the current case will result in an increase in future trials.

In summarizing the costs and benefits of plea bargaining, evidence indicates that plea bargaining is likely to be cost-effective. First, it was noted that when sentence concessions were made, the cost of future crime and crime control

Table 8.
1974 Dispositions and New Processing Two Years Subsequent to the Initial Disposition (1974-1976)[a]
(percentage)

Original Disposition	New Processing				
	None	Plea	Trial	No Prosecution	No Filing
	ASSAULT[a] (N = 1,962)				
Plea	78%	8%	3%	5%	5%
Convicted at Trial	83	7	3	3	3
Acquitted at Trial	81	5	6	3	5
Nolle/Dismissal	73	8	4	9	6
No Filing	73	7	3	10	7
	ROBBERY (N = 1,199)				
Plea	75%	9%	3%	7%	6%
Convicted at Trial	85	5	3	6	1
Acquitted at Trial	59	10	3	16	11
Nolle/Dismissal	57	15	6	16	7
No Filing	59	11	7	11	13
	LARCENY (N = 2,156)				
Plea	61%	16%	5%	11%	6%
Convicted at Trial	62	15	5	11	8
Acquitted at Trial	63	12	5	7	13
Nolle/Dismissal	76	9	2	8	4
No Filing	65	11	5	12	7
	BURGLARY (N = 1,189)				
Plea	68%	14%	2%	10%	7%
Convicted at Trial	71	13	4	13	0
Acquitted at Trial	50	15	5	20	10
Nolle/Dismissal	58	15	5	15	7
No Filing	64	11	5	11	9

Source: PROMIS.

[a]Because of the small number of observations in some cells, Chi-square is not meaningful for this category.

increased. However, bargains were less pervasive than seems commonly imagined, and even where they did occur, the savings in terms of a foregone trial probably offset the cost of increased recidivism. Second, the greatest cost to the public, and to the criminal justice system, likely arises from a failure to prosecute. If plea bargaining enables the prosecutor to handle a larger number of cases, then it is likely to lead to considerable future savings in terms of reduced recidivism and the costs of criminal justice. A reasonable assessment of the data presented is that plea bargaining is cost effective, at least in the District of Columbia Superior Court, and for the costs and benefits considered here.

It should be noted that to this point other costs and benefits have not been incorporated into the analysis. The benefits derived, in terms of reduced crime, are purchased at a cost of expensive prisons and jails.[31] The size of the benefit-cost ratio of incarceration remains an open question that cannot be resolved without accurate measurement of the cost of crime, the utilitarian returns from punishment (deterrence, rehabilitation and incapacitation) and the value to the

public of retribution. A second notable omission is any mention of the returns of "doing justice." This second omission is intentional, but not permanent; this important consideration will be addressed in Chapter 6.

SUMMARY

A question was posed early in this chapter: Who gains and who loses from plea bargaining? It is now possible to summarize an answer to this question.

The Defendant

If a defendant goes to trial, he stands a fairly good chance of acquittal. A guilty plea makes conviction a certainty. Concern was expressed that a guilty plea increased the conviction of the *factually* guilty, but at the expense of convicting the *legally* innocent.

Contrary to expectations, sentence concessions were not routinely awarded to suspects entering guilty pleas. In fact, no bargaining was apparent for assault and larceny cases. For burglary, many guilty pleas followed charge reductions, but there was no evidence that these charge reductions resulted in lenient sentences. Only for the offense of robbery were sentences more severe for offenders convicted by trial. In these cases, probation was more frequent, and prison sentences tended to be shorter, for suspects convicted by plea. Many guilty pleas followed charge reductions.

Defendants who were formally processed did not seem to differ substantially, in terms of probability of conviction, from suspects whose cases were nolled or dismissed for want of prosecution. Willingness of a witness to testify was an important determinant of final prosecution.

The Prosecutor

As the defendant's adversary, the defendant's losses are the prosecutor's gains. Thus, the prosecutor benefits from increased convictions and loses little from bargaining concessions. Only for robbery do guilty plea defendants appear to receive more lenient treatment.

Since a trial is much more expensive than a guilty plea, a guilty plea saves the prosecutor resources. It is likely that without those savings his office would be forced to handle a reduced work load.

We find no evidence that plea bargaining causes the prosecutor's future work load to increase substantially. On the contrary, the informal conviction of current cases—by increasing the overall number of convictions without significantly reducing the sentences received—appears to reduce the amount of criminal cases that are received in the future.

The Public

The plea process reduces criminal behavior, largely by increasing the number of convictions without offsetting losses resulting from more lenient plea bargain sentences.

The public benefits from (1) a reduced cost of processing current criminal cases and (2) a reduced rate of future criminal cases and, as a result, a smaller dollar cost for future processing.

Evidence to this point indicates that a significant improvement in criminal court processing would result from preventing evidence of guilt from deteriorating, largely due to problems with witnesses.

Notes

1. Although originally included, race was eventually excluded as an explanatory variable because almost all accused offenders in the data base were black.

2. Theodore G. Chiricos and Gordon P. Waldo, "Socioeconomic Status and Criminal Sentencing: An Empirical Assessment of a Conflict Proposition," *American Sociological Review* 40 (December 1977); John Hagan, "Extra-legal Attributes and Criminal Sentencing: An Assessment of a Sociological Viewpoint," *Law and Society Review* 8, no. 2 (Winter 1974); Edward Green, "Inter- and Intraracial Crime Relative to Sentencing," *Journal of Criminal Law, Criminology and Police Science* 54, no. 3 (September 1964); Roy Lotz and John D. Hewitt, "The Influence of Legally Irrelevant Factors on Felony Sentencing," *Sociological Inquiry* 47, no. 1 (1977); Peter J. Burke and Austin T. Turk, "Factors Affecting Postarrest Dispositions: A Model for Analysis," *Social Problems* 22 (February 1975); Herbert Jacob and James Eisenstein, "Sentencing and Other Sanctions in the Criminal Courts of Baltimore, Chicago and Detroit," *Political Science Quarterly* 90, no. 4 (Winter 1975–76); John Hagan, "Criminal Justice in Rural and Urban Communities: A Study of the Bureaucratization of Justice," *Social Forces* 55, no. 3 (March 1977); William M. Rhodes, "A Study of Sentencing in the Hennepin County District Courts," *The Journal of Legal Studies* 6, no. 2 (June 1977); and Lawrence P. Tiffany, Yakov Avichai, and Geoffrey W. Peters, "A Statistical Analysis of Sentencing in Federal Courts: Defendants Convicted After Trial, 1967–68, *The Journal of Legal Studies* 4, no. 2 (June 1975).

3. Terence Dungworth, *An Empirical Assessment of Sentencing Practices in the Superior Court of the District of Columbia.* PROMIS Research Publication no. 17 (INSLAW, forthcoming).

4. As explained in the technical appendix, the lack of a finding with respect to age may be due to a specification problem in the regression equations, rather than to a lack of correspondence between age and treatment by the courts.

5. In a study of pretrial release practices in the District of Columbia, over 40 percent of the felony defendants were released on personal recognizance; previous record, number of cases pending, and employment were important variables in predicting release. But there is considerable doubt about how strongly these variables are correlated with pretrial misconduct and, thus, whether ROR clients actually make better probation risks. Jeffrey A. Roth and Paul B. Wice, *Pretrial Release and Misconduct in the District of Columbia*, PROMIS Research Publication no. 16 (INSLAW, forthcoming).

6. Regression analysis results in an upward bias in apparent predictive power, a problem known as shrinkage of the multiple correlation, whereby the amount of the bias is inversely related to sample size. Researchers will frequently use cross-validation, a process of using part of the data to estimate the parameters and the other part to measure predictive power, to eliminate the bias. In the present context, however, the more precise estimates derived from the full complement of data seemed more important than an accurate assessment of explanatory power. If we accept a strict regression analogue and calculate adjusted R^2, then explanatory power falls from .23 to .16 (assault), .38 to .34 (robbery), .28 to .25 (larceny), and .30 to .25 (burglary). See: Fred N. Kerlinger and E. Pedhazur, *Multiple Regression in Behavioral Science* (New York: Holt, Rinehart and Winston, 1973), pp. 282–83.

7. There are several ways to "guess" at the sentence. The method chosen here is analogous to that used to calculate lambda, a measure of association commonly used in contingency table analysis. The technique requires one to assign defendants randomly to each of the sentencing categories so that the final number of defendants placed in each category equals the number actually observed in that category. Probability theory is used to calculate the expected number of mistakes that would arise through such a process.

8. Dungworth, *An Empirical Assessment of Sentencing Practices:* III.7.

9. These findings are consistent with those reported by Dungworth in *ibid.* Dungworth reports marked sentence concessions awarded to robbery suspects. His findings with respect to other personal crimes are not comparable, because he did not include misdemeanors in his analysis. With respect to crimes against property (he includes crimes against the public order in this category), his findings were comparable to those reported here: 50 percent of the guilty plea convictions resulted in probation relative to 48 percent of the convictions at trial (pp. V–35 and V–36).

10. These findings differ from results reported in most of the studies cited in Chapter 1, notes 9 and 10. A notable exception is a study conducted by James Eisenstein and Herbert Jacob and reported in *Felony Justice: An Organizational Analysis of Criminal Courts* (Boston: Little, Brown and Company, 1977): 277 and 283. Eisenstein and Jacob found that knowledge of the type of disposition explains little of the variance either for the decision to sentence a convicted offender to prison or for the length of time to be served if sent to prison. William Rhodes, Steven Seitz, and Thomas Blomberg reported similar findings in Salt Lake City, Duluth, and San Mateo. "An Evaluation of the LEAA Replication of the Des Moines Community-Based Corrections Program" (1977), available from INSLAW. In fact, in the lower courts, a guilty plea frequently leads to a more severe sentence than does conviction at trial.

11. Note that the probability of convicting accused burglars *decreased* with both the availability of physical evidence and with the number of lay witnesses (in contrast to robbery convictions). It seems that either (a) the variables are proxies for other elements of the offense or (b) the evidence may be used by the defense as well as the prosecutor. As an illustration, the availability of a lay witness in a burglary offense may indicate a more "trivial" offense, such as that of a friend stealing from a friend. On the other hand, the lack of a lay witness may more typically indicate a nighttime burglary of, say, a warehouse in which there were no witnesses. In a private communication, Malcolm Feeley reported that this latter explanation was consistent with his findings, based on a different data base.

12. We know of only one other study that has attempted to predict the probability of conviction *at trial* using the availability of evidence and witnesses as explanatory variables. That study is Eisenstein and Jacob's *Felony Justice*. Unfortunately, Eisenstein and Jacob exclude some variables included in our analysis; they include other variables that are not included in the present study; and since they do not report the specification of their regressions or detail their findings, it is difficult to make a direct comparison. Nevertheless, it is notable that they, too, were unable to account for much of the "variance" in their data and attributed very little of their explanatory power to "strength of the evidence" (p. 242). They are careful to point out, however, that this failure may be attributable to measurement errors in the variables representing "strength of the evidence" (p. 183). It appears that the amount and quality of evidence are reported in greater detail, and with more accuracy, in PROMIS.

13. Given the present mix of guilty pleas (G) and trials (T), the observed proportion of cases going to trial that result in conviction (P_t) and the estimated proportion of guilty plea cases that would result in conviction if tried (P_{gp}), the conviction rate equals $[(T \times P_t) + G] / [T + G]$. If all defendants who presently plead guilty actually went to trial, the conviction rate would fall to $[(T \times P_t)+(G \times P_{gp})] / [(T + G)]$.

14. This is likely to be explained in part by the fact that there may be fewer appropriate "lesser included offenses" for assault and larceny, so these findings reflect statutory rather than behavioral explanations. Our main interest is to work with sentence concessions, and the only purpose in including these statistics here is to record the *extent* to which a charge reduction is used, by the prosecutor, to communicate a desire for sentence leniency.

15. Arthur Rosett and Donald Cressey, *Justice by Consent: Plea Bargains in the American Courthouse* (New York: J.B. Lippincott Company, 1976).

16. Correcting for the category "unknown" involved dividing the percentages in each row by the number 1–% unknown. This correction factor assumes that "unknown" is uniformly distributed throughout the explanations given. We have no evidence or reason to believe that the category "unknown" varies systematically. It varies little across offense categories and only slightly and irregularly over time.

17. Kristen M. Williams, *The Role of the Victim in the Prosecution of Violent Crimes*, PROMIS Research Publication no. 12 (INSLAW, forthcoming).

18. Frank J. Cannavale, Jr. and William D. Falcon (ed.), *Improving Witness Cooperation: Summary Report of the District of Columbia Witness Survey and a Handbook for Witness Management* (Lexington, Mass.: Lexington Books, 1976): 6.

19. *Ibid*: 7.

20. *Ibid*: 16.

21. *Curbing the Repeat Offender: A Strategy for Prosecutors*, PROMIS Research Publication no. 3 (Washington, D.C.: INSLAW, 1977).

22. This description comes from Kristen M. Williams, *Robbery and Burglary: A Study of the Characteristics of Persons Arrested and the Handling of Their Cases in Court*, PROMIS Research Publication no. 6 (INSLAW, forthcoming); and Kathleen B. Brosi, *A Cross-city Comparison of Felony Case Processing* (INSLAW, forthcoming).

23. Brosi, *ibid.*: IX–10 and IX–11. Brosi reports a similar program impact in Detroit. In New Orleans and Indianapolis, the dismissal rate is the same for career criminal and other felony prosecutions, but for career criminals, the trial rate is greater; and cases that go to trial more frequently result in conviction.

24. PROMIS Research Publication no. 10 (INSLAW, forthcoming): II–6.

25. *Ibid.*: II–7.

26. In her report on recidivism, Williams reported no statistically significant correlation between recidivism and disposition (except for cases not filed and individuals acquitted at trial who recidivated less frequently) when other factors were held constant. These findings do not contradict those presented here. Williams measured recidivism taking into account time at risk; that is, she isolated the *incapacitative* effect from the *rehabilitative/deterrent* effect. Accepting her findings, most of what is reported in this study can be attributed to the incapacitative effect of incarcerating convicted criminal offenders. *Ibid.*: V–3.

27. Probability of a new offense following trial = (probability of conviction at trial × probability of a new offense if convicted) + (probability of acquittal at trial × probability of a new offense if acquitted) = (.77 × .17) + (.23 × .45) = .23. The probability of an offense following a guilty plea = .27. If only new arrests for felonies are considered, the probability of an arrest for a felony = (.77 × .07) + (.23 × .21) = .10; for a guilty plea defendant, the probability = .18.

28. The probability of a new crime following trial = (.66 × .32) + (.34 × .56) = .40. The probability of a new crime following a guilty plea = .27.

29. Recall from Figure 5 that a larger proportion of larceny dismissals were diverted from the criminal justice system. This is preliminary evidence that this diversion program has a successful impact on these offenders, although selectivity bias by the program may explain the results. Holahan conducted an analysis that is in agreement with these findings. John Holahan, "Measuring Benefits from Prison Reform," in Robert H. Haveman, *et al.*, ed., *Benefit-Cost & Policy Analysis* (Chicago: Alden Publishing Company, 1973). Roberta Rovner-Pieczcnik has challenged these findings: *Pre-Trial Intervention Strategies: An Evaluation of Policy Related Research and Policy Maker Perceptions*, National Pre-Trial Intervention Service Center, American Bar Association, Commission on Correctional Facilities and Services (Washington, D.C., 1974). Also, in her more sophisticated study of recidivism, Williams found no demonstrable independent effect of the diversion program. Williams, *Scope and Prediction of Recidivism*: V-5–V-8.

30. Ralph Anderson and Associates, *Guidelines for Determining the Impact of Legislation on the Courts*, Judicial Council, State of California (Sacramento, 1974). These figures do not reflect police costs, which are likely to increase with the volume of arrests. John Holahan has estimated the cost per crime as: robbery ($8,737), burglary ($7,132), and larceny ($6,040). Most of these dollar estimates reflect *processing* costs. If these estimates are at all accurate, they reflect significant dollar costs that are contingent on an individual's present handling by the criminal justice system.

31. For some attempts at cost-benefit calculations for correctional programs see: William M. Rhodes, Steven Seitz, and Thomas Blomberg, "The Costs and Benefits of Community-Based Corrections" (1977), available from INSLAW.

5

Why Do Guilty Pleas Occur?

Chapter 4 provided insights into the private and social costs and benefits of plea bargaining, but it did not explicitly address why plea bargains arise, nor why guilty pleas greatly outnumber trials. In this chapter, the question is posed: Why do plea bargains occur? Answers are sought in the following explanations:

(1) Resource constraints require inexpensive dispositions for routine cases.

(2) The sentence following a guilty plea reflects what is likely to happen at trial and thereby reduces the uncertainty of trial, as well as the organizational and pecuniary expenses that a trial entails.

(3) Plea bargaining increases the defendant's confidence that the sentence will reflect mitigating circumstances relevant to his case.

(4) Variations in plea bargaining can best be explained by the proclivities of individual prosecutors, defense counsel, and judges to settle out of court.

THE IMPACT OF RESOURCE CONSTRAINTS ON CASE DISPOSITION

There is little question that plea bargaining as a method of case disposition has, to a large extent, arisen because of resource constraints imposed on key criminal justice actors. For the prosecutor, for example, it has been estimated that an average felony trial requires an additional 40 hours of attorney time beyond what is required for a guilty plea. The additional preparation costs about $388. In contrast. guilty plea negotiations seldom require more than ten or fifteen minutes of attorney preparation.

Public defenders and appointed and private attorneys are said to have even tighter resource constraints. In the District of Columbia, the public defender's office employed 39 full-time litigating lawyers and closed the cases of more than 4,066 clients during FY 1975, hardly a program capable of supporting a large number of trials.[1] Out-of-court settlements appear to be dictated in routine cases.

From a California study, a jury trial required 1,452 minutes on the average, and cost the state over $3,000.[2] In contrast, processing a guilty plea took about fifteen minutes and cost about $215. Assuming similar estimates pertain to the D.C. Superior Court, the judiciary would most likely be expected to join the prosecutor and defense counsel in promoting guilty pleas.

Because of the high resource costs of a trial, it is reasonable to believe that fewer cases could be processed if more trials were demanded. Thus, plea bargaining is an adaptation to resource constraints. In this study, a narrower issue was examined; specifically, accepting the argument that in the long run resource con-

straints provide an incentive to plea bargain, is it possible to observe short-run adjustments in case disposition following changes in work loads.

Data were available over a two-year period commencing on January 1, 1974, and ending on December 31, 1975. For each week over this period, it was possible to determine the following: (1) the ratio of trials to guilty pleas; (2) the ratio of nolles and dismissals to all dispositions (nolles, dismissals, trials, and guilty pleas); (3) the number of arrests; (4) the number of cases filed; and (5) the number of trials. Interest centered on explaining the ratio of trials to pleas and the ratio of dismissals to total dispositions, as functions of work load, which was measured alternatively as arrests, filings, and trials. The analysis was repeated separately for felony cases and misdemeanors.

Statistical testing, involving an advanced regression model, was complex. Specification of the regression equations can be found in the technical appendix. The findings are unambiguous, however: we uncovered no evidence that, over the short run, case dispositions varied with work loads.

The evidence is consistent with an explanation that increasing work loads are handled by temporary increases in productivity or by letting the backlog of cases build.[3] Short-run adjustments are not made in the way that cases are handled, or at least the adjustments were not apparent in the decision to nol pros or in the decision to go to trial. Concluding that work loads cannot, in the short run, explain much about plea bargaining, we excluded work load as an explanatory variable from the remainder of this analysis.

REDUCING UNCERTAINTY

A second explanation of why plea bargains arise is that the sentence following a guilty plea reflects what is likely to happen at trial and thereby reduces both the uncertainty of a trial and the organizational and pecuniary expenses a trial entails. If this argument has substance, it would be expected that the offer of a charge reduction, reputed to be the dominant form of concession offered by the prosecutor in the District of Columbia, should decrease with the probability of conviction and increase with the severity of the sentence that would be expected if the case went to trial.

Attempting to confirm these expectations raises a problem. While prosecutors may reduce charges to facilitate guilty pleas, other types of bargains are offered, and a charge reduction is reputedly not necessary to extract a plea bargain concession from the sentencing judge. Recognizing this, a second proposition was posed. The severity of the sentence received following a guilty plea should (a) increase with the probability of conviction at trial, (b) decrease with the probability of receiving probation if convicted at trial and, if charge reduction is important, (c) decrease when the prosecutor has agreed to reduce charges.

Table 9 shows whether these patterns exist. First, the table compares characteristics of individual cases in which there was a charge reduction with those in which a charge reduction was not offered. This comparison is drawn for the probability of acquittal at trial (estimated from the earlier conviction regressions), the probability of conviction at trial (estimated by the screening prosecutor), and the probability of probation if convicted at trial (estimated using the earlier sentencing regressions).[4] One other variable, whether the defendant was released on personal recognizance, was also included in the table. This latter variable permits us to test the hypothesis that pretrial release conditions affect a defendant's ability to bargain.

Table 9 also compares cases by type of sentence received following a guilty plea. Defendants receiving probation were compared with defendants receiving a

Table 9.
Comparison of the Probability of Conviction at Trial, the Probability of Probation Following Conviction at Trial, and Pretrial Release Status, by Charge Reduction and Sentence (percentage)

Disposition and Offense	Probability of Acquittal	Probability of Conviction	Probability of Probation	Release on Recognizance	Charge Reduction
Defendant Received a Charge Reduction:					
Assault					
Yes	44%[a]	73%	74%	58%[b]	
No	38	74	71	53	
Robbery					
Yes	21[a]	73[a]	31[a]	44	
No	14	79	22	27	
Larceny[c]					
Yes					
No					
Burglary					
Yes	32	77	51	42	
No	31	77	50	35	
Defendant Sentenced to Probation following a Guilty Plea:[c]					
Assault					
Yes	36[d]	73	78	62	11
No	17	75	55	40	00
Robbery					
Yes	18[b]	76	30[a]	42	31
No	9	81	12	9	00
Burglary					
Yes	33	76	54[a]	47[a]	18
No	30	81	40	12	00
Larceny					
Yes	30	76[a]	71[a]	58[a]	4[b]
No	30	79	55	26	7

[a]Statistically significant at .01.
[b]Statistically significant at .05.
[c]Because of the infrequency of charge reductions for larceny cases, no calculations were made for this offense.
[d]Statistically significant at .10.
[e]For assault, the alternative to probation is a prison sentence for any length of time. For all other offenses, the alternative to probation is a minimum sentence of three years or more.

minimum prison sentence of three years or more (robbery, burglary, larceny) or a minimum sentence of any length (assault). Variables used to characterize cases correspond to those employed above. Findings were buttressed by statistical analysis reported in the technical appendix; the statistical significance reported in the table refers to this statistical analysis.

The evidence in Table 9 is consistent with the expectation that a charge reduction reflects the likely outcome of a trial. For assault and robbery, there is a

statistically significant higher probability of acquittal; for robbery, there is a statistically significant higher probability of probation following trial, for those persons who actually pled to a reduced charge. This finding indicates that the prosecutor assesses the outcome of a trial and reduces charges with this outcome in mind. Defendants receiving no reductions actually have more charges lodged against them. Thus, "room for bargaining" does not appear relevant; apparently an increase in charges increases the probability of conviction and the severity of the sentence following a trial; in turn, the certainty and severity of a sentence reduce the likelihood of a charge reduction. It is also interesting to note that persons released on personal recognizance are much more likely to receive charge reductions. This is evidence that either (1) the prosecutor can take advantage of the lack of bargaining power of defendants who remain in jail prior to adjudication or (2) that the individual's community ties and "dangerousness" to the public—already considered in the ROR decision—are also taken into account by the prosecutor.[5]

Clearly, a charge reduction is contingent on likely trial outcomes. But is a charge reduction a prerequisite for plea bargaining in the D.C. courts? We answer this question next and also determine whether the sentence received following conviction by plea varies with the certainty and severity of the sentence that would be received following trial.

Table 9 indicates that, indeed, sentences do reflect trial outcomes. Compare the probability of acquittal for individuals receiving probation with the same probability for individuals receiving three years or more as a minimum prison sentence. The differences are .36 to .17 (assault), .18 to .09 (robbery), .33 to .30 (burglary) and .30 to .30 (larceny). Looking at the same sentences with respect to the probability of probation following conviction by trial, the differences are .78 to .55 (assault), .30 to .12 (robbery), .54 to .40 (burglary), and .71 to .55 (larceny). This is strong evidence that sentencing following a guilty plea approximates what would happen at trial.

Interestingly, statistical results reported in the technical appendix do *not* indicate that a charge reduction, by itself, results in sentence leniency. One reason for this is that conviction at trial may be to a "reduced" charge, although charge reductions remain more frequent for guilty plea convictions. Leniency is indicated by the findings in Table 9, which show that persons who received probation rather than lengthy prison terms were much more likely to have been released on personal recognizance: .62 to .40 (assault), .42 to .09 (robbery), .58 to .26 (larceny), and .47 to .12 (burglary). These findings indicate that the defendant's "dangerousness" and suitability for probation (indicated by firm community ties) are taken into account in the sentencing decision. Likewise, the sentencing decision varies with the number of charges. For assault, defendants receiving probation have, on the average, 2.7 charges compared with 4.0 for those receiving lengthy sentences. Comparable figures for other offenses are 3.3 to 5.9 (robbery) and 2.9 to 5.2 (burglary).

These findings indicate that the often-used characterization of prosecutors "bargaining away the store" is erroneous, at least for the D.C. courts. In Chapter 4, it was shown that, with the exception of guilty pleas following an arrest for robbery, the average guilty plea results in a sentence closely corresponding to that received by similar defendants convicted at trial. The above analysis demonstrates regularity in sentencing patterns. Persons who were dealt with leniently following a plea likely would have been shown leniency following conviction at trial; the converse holds for those offenders receiving harsh sentences. These findings point to a conclusion that the guilty plea process is an economical routine for approximating the outcome of an expensive trial.

In closing this section, we must note that neither the probability of conviction nor the likely sentence to be received following conviction explains the decision to actually *enter* a guilty plea. Neither does pretrial detention nor the number of charges filed play an explanatory role.[6] To this point, our findings shed little light on the question of who enters guilty pleas.

MITIGATING CIRCUMSTANCES

Legal scholars have argued that plea bargaining distributes justice more equitably by taking into account mitigating circumstances in negotiating a settlement. However, our findings indicate (with a few exceptions, as shown in the technical appendix) that it did not matter (a) that the crime was corroborated, (b) that there was exculpatory evidence, (c) that there was provocation by the victim, (d) that there was participation by the victim, (e) that the defendant was only an aider or abettor to the offense, or (f) that the primary victim was a corporation, association, or institution. *In individual cases these factors may be important,* but accounting for them in statistical analysis did not provide any additional insight into the guilty plea process.

INDIVIDUAL PROCLIVITIES OF PROSECUTORS, DEFENSE COUNSEL, AND JUDGES

Some scholars have argued that variations in plea bargaining arise because individual actors (prosecutors, defense counsel, and judges) have different preferences about bringing a case to trial. To investigate these individual differences as explanations of guilty pleas, we ranked these "actors" according to the frequency with which they settled criminal cases by guilty pleas. Then these rankings were compared across different types of offenses. If the rankings persisted (were statistically significant) across crime categories, this was accepted as evidence that individual proclivities must be taken into account in any explanation of plea bargaining.

A prosecutor was included in the analysis only if he had been responsible for at least five criminal cases of the type used to establish the rankings. This meant that 26 prosecutors were included for burglary and robbery, and 19 were included for assault and larceny. For burglary, the top six prosecutors disposed of all cases by plea, the bottom five disposed of 75 percent by plea. For robbery, the top and bottom five disposed of 96 percent and 44 percent of their cases, respectively, by pleas. For larceny, the top and bottom four settled 100 percent and 67 percent of their cases, respectively, by pleas; for assault, the comparable rates were 93 percent and 49 percent.

These comparisons indicate considerable variance across prosecutors in the use of plea bargaining, and the variance can be explained by the willingness of individual prosecutors to go to trial. It can also be explained by assignments, since some prosecutors often handle cases from other prosecutors with instructions about plea agreements previously made with the defendant. The rank order correlation between burglary and robbery was statistically significant at .10 (i.e., indicating that there was a marginal relationship between prosecutors and dispositions), and it was statistically significant at .05 for assault and larceny (i.e., indicative of a strong relationship). It is reasonable to conclude that the rate of guilty pleas does vary across prosecutors.

Next, judges were ranked with respect to the proportion of their cases terminated with guilty pleas. Twenty-seven judges were included in the rankings for robbery and burglary, and 26 were included in the rankings for larceny and as-

sault. Only judges who had terminated at least five cases of each type considered were included in the rankings.

We uncovered absolutely no evidence that judges varied according to a regular pattern in the proportion of cases settled by guilty plea. This finding is consistent with qualitative evidence that there is little or no judge shopping for felony cases in Superior Court.[7]

Finally, the rate at which defense counsel participate in plea bargaining was examined. Here the data were grouped as "public defender" and "other" (consisting of counsel appointed through the Criminal Justice Act and privately retained attorneys); a Chi-square test was used to determine whether type of representation made a difference in whether the defendant went to trial. We found no evidence that type of counsel was correlated with this decision.

Having found that type of counsel did not affect the choice between a trial and a guilty plea, we examined whether *individual* defense lawyers were more or less likely to go to trial. As was done with prosecutors and judges, the rankings (by frequency of guilty plea dispositions) of defense counsel were compared for larceny and assault, and robbery and burglary. Only attorneys who handled at least four cases of each type of offense were included in the analysis. Altogether, there were 23 lawyers in the robbery and burglary comparisons and 18 lawyers in the larceny and assault comparisons. The resulting rank order correlations indicated that knowing the defense counsel did not increase our ability to explain who goes to trial. That is, there was little or no consistency in the rates at which defense lawyers went to trial.

These findings do not indicate that the defense counsel never matters. On the contrary, experienced prosecutors have stated that some attorneys are known as "pleaders" and are treated accordingly. What this evidence does indicate, however, is that the proclivities of individual defense counsel to go to trial, or to enter a guilty plea, are not so strong that taking them into account improves our ability to understand the guilty plea process.

SUMMARY

In this chapter, explanations were offered for why guilty pleas occurred. Four conclusions were reached:

(1) In the long run, resource constraints undoubtedly have an effect on case dispositions. For the short run, however, we found no evidence that work loads affect the way that cases are handled.

(2) The probability of charge reduction and the severity of the sentence received following conviction at trial varied in the expected direction both with the probability of conviction at trial and the probability of receiving probation if convicted at trial. Plea bargaining was found to be an inexpensive way to approximate the outcome of a trial. The plea bargain itself (a reduced charge) had no independent effect on the sentence received following a guilty plea. We did find that defendants released on personal recognizance did considerably better at sentencing than defendants who received a different form of release or were detained in jail.

(3) Mitigating circumstances were not reflected in our examination of the guilty plea sentence.

(4) Prosecutors varied in the extent to which they disposed of criminal cases by going to trial.

Notes

1. Public Defender Service for the District of Columbia, *Fifth Annual Report*, Fiscal Year 1975 (July 1, 1974–June 30, 1975). More than half of these cases were handled by either the family or mental health division. Others were felonies (40 percent) and misdemeanors (10 percent) handled in Superior Court.

2. Ralph Anderson and Associates, *Guidelines for Determining the Impact of Legislation on the Courts*, Judicial Council, State of California (Sacramento, 1974).

3. See Jack Hausner and Michael Seidel, *An Analysis of Case Processing Time in the District of Columbia Superior Court*, PROMIS Research Publication no. 15 (INSLAW, forthcoming).

4. Although the screening prosecutor's estimate of the probability of conviction was not correlated with the actual probability of conviction at trial, it was included in the regression specifications because of its potential effect on the prosecutor's behavior. That is, even erroneous information—if believed—is important in making decisions.

5. See Jeffrey A. Roth and Paul B. Wice, *Pretrial Release and Misconduct in the District of Columbia*, PROMIS Research Publication no. 16 (INSLAW, forthcoming), for a discussion of the empirical validity of these assertions.

6. Compare these findings with Lynn Mather, "Some Determinants of the Method of Case Disposition: Decisionmaking by Public Defenders in Los Angeles," *Law and Society Review* 8, no. 1 (Fall 1973). However, it should be noted that some of the explanatory variables used for our analysis actually measured the perceptions of the trial outcome held by the prosecutor and defense counsel. A more rigorous examination of the decision to enter a guilty plea must take these "mentalistic constructs" into account. C.f. William M. Landes, "An Economic Analysis of the Courts," *The Journal of Law and Economics* 14 (April 1971): 61–107.

7. Individual judges do have reputations for handling a large number of guilty pleas, at least for misdemeanors, and it is possible to judge shop in misdemeanor cases. "One judge . . . stands out as unusually lenient. In 1975 he accepted more guilty pleas (756) than all other judges on the court combined (623). The reason: [he] sends to jail less than 14 percent of those who plead guilty or are found guilty by him [relative to 25 percent overall]." David Pike and Tom Crosby, "Criminals 'Shop Around' in District Courts for the 'Soft' Judges," *The Washington Star*, January 10, 1978.

6

Crime Control and Due Process Concerns

In the previous five chapters, two questions were addressed: Who gains and who loses from plea bargaining? Why do plea bargains occur? Important aspects of plea bargaining were quantified, and the findings point toward policy prescriptions, at least for the Superior Court of the District of Columbia. In this chapter, concern shifts from positive analysis (i.e., analysis of how the criminal justice system *does* work) to normative analysis (i.e., analysis of how the criminal justice system might be made to work better).

Along with this shift comes recognition that competing demands are made of criminal justice and that no universal criterion is available to determine whether and when the process works well or badly. Readers inclined toward a crime control perspective will probably place more emphasis on implications the findings have for the control of criminal activity; those of a due process bent will likely weigh their notions of "justice" more heavily in any deliberation. Therefore, readers searching for unequivocal policy prescriptions are likely to be disappointed.

Given the plurality of interests represented in the criminal justice system, no set of recommendations agreed upon by all could possibly evolve. However, it is possible to go too far with this caveat. In fact, a good deal of the material we have presented suggests recommendations consistent with both crime control *and* due process. This assertion is not paradoxical; despite the differences between the crime control and due process models, Herbert Packer carefully points out that both have a shared set of agreed assumptions.

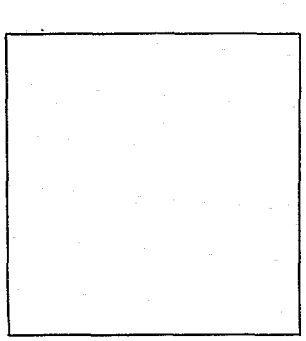
FACTUAL GUILT; LEGAL INNOCENCE

The main thrust of the crime control and due process models can be usefully compared: the crime control perspective emphasizes arrest, conviction, and sentencing of the factually guilty; the due process model emphasizes protection of all, especially the legally innocent. Of course, this characterization is useless until these terms are carefully defined and made operational, a task attempted in this section.

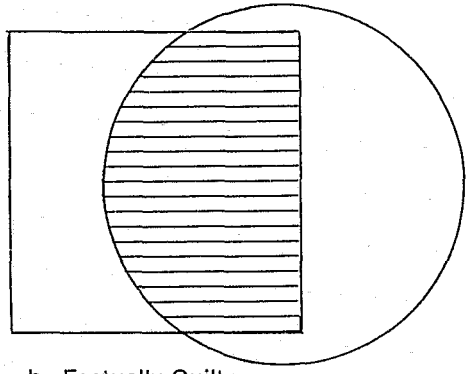
Working definitions of factual and legal guilt will be developed diagramatically, using Figure 6 as a reference. Although guilt and innocence are unobservable, a proxy for factual guilt that is consistent with the crime control model and a proxy for legal guilt that is consistent with the due process model follow from earlier analysis. We turn to the definitions first, operationalizing these definitions second.

As a first step in defining terms, examine Figure 6.a, which consists of a rectangle representing a group of persons arrested for criminal offenses and processed in

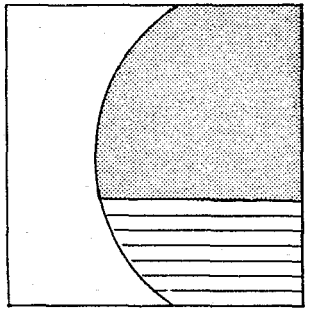
Figure 6.
Diagrammatic Exposition on Factual and Legal Guilt



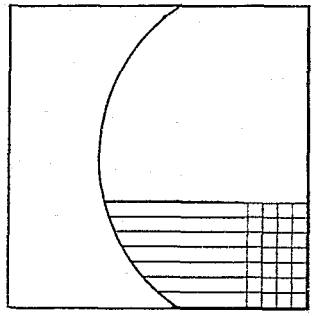
a. Arrests



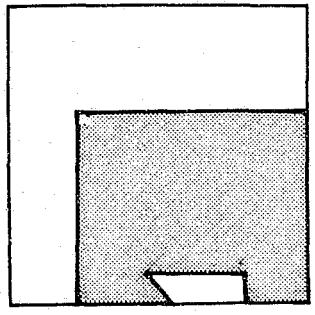
b. Factually Guilty



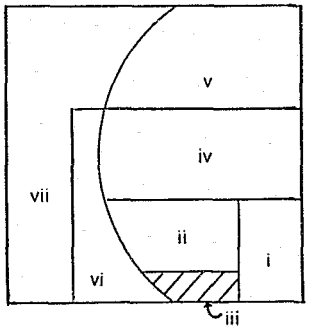
c. Legally Guilty



d. Convicted at Trial



e. Total Convictions



f. Dispositions

KEY:

Disposition

Factual Guilt \ Legal Guilt	Conviction: Yes	Conviction: No	No Conviction: Yes	No Conviction: No
Yes	i,ii	iv	iii	v
No	vi	vi	*	vii

*Presumed to be small or non-existent.

a single criminal justice jurisdiction. If the number of persons arrested were to increase, so would the dimensions of the box. Each point in this rectangle represents one arrestee.

In 6.b, a circle representing individuals who are factually guilty is superimposed on the "arrest rectangle." By factual guilt we mean that individuals represented by this circle have committed a crime (not necessarily the one charged) and are culpable for their actions. The arrest, conviction, and sentencing of persons in this circle constitute the principal emphasis of crime control, but of course, not all of the factually guilty are arrested. The intersection of the arrest rectangle with the factually guilty circle represents individuals who (a) are factually guilty and (b) have been arrested. Since persons not arrested are beyond the purview of this study, the area of the circle that is outside the rectangle is omitted from subsequent figures.

There are three distinct groups in Figure 6.c: defendants who are legally and factually guilty (horizontal lines), defendants who are legally innocent but factually guilty (shaded), and defendants who are neither factually nor legally guilty. By legal guilt we mean that (a) there is sufficient evidence to convince a judge or jury that a crime has been committed; (b) evidence exists to convince a judge or jury beyond a reasonable doubt that the defendant committed the offense; (c) the prosecutor has countered any defense arguments asserting procedural irregularities; and (d) the prosecutor has established that the defendant is culpable for his actions.

It is important to be aware that factual guilt does not imply legal guilt. While the legally guilty are likely to be factually guilty because of the high standards of proof necessary to establish legal guilt, the converse is not true. As a result, legal guilt has been drawn as a subset of factual guilt. In the crime control model, a premium is placed on convicting the factually guilty; in the due process model there is a strong incentive to convict only the legally guilty. Since these two sets are not identical, at times advocates of the two models must necessarily work at cross purposes, which introduces an important friction between the two camps.

It can be seen in 6.d that the legally guilty are not always convicted at trial. That is, it is assumed that resource constraints limit the number of trials, and hence convictions at trial, to the cross-hatched area of Figure 6.d. In 6.e, most convictions are recognized to arise from guilty pleas; hence, the shaded region contains all persons who were convicted either by trial or by plea. Note the irregular-shaped region enclosed by the shaded area and the lower boundary of the arrest rectangle. This set contains persons who are legally guilty—that is, who would be convicted at trial—but whose cases for some reason were nolled.

Finally, in 6.f, the shaded region appearing in 6.e is broken into regions that play an important role in the following discussion. First, there are regions that should be maximized (minimized) according to both the crime control and due process philosophy. Region i, identified earlier, is composed of individuals who are legally and factually guilty and who are convicted at trial. Region ii consists of persons who are legally and factually guilty, and convicted by guilty plea. Since legal and factual guilt exist, a well-ordered criminal justice system would make the sum of these two large. Correspondingly, both models would agree that the area of iii (legal and factual guilt followed by no conviction) should be minimized. In regions vi and vii, the defendant is not factually guilty, a condition acceptable to both models only if he is not convicted.

Second, there are regions corresponding to dispositions whose propriety is disputed. Individuals are assumed factually guilty, but legally innocent, in region iv. These individuals have committed an offense but would be acquitted at trial. The dispute arises because these persons are convicted by plea, an outcome not

acceptable from the due process perspective. Likewise, persons in region v are factually but not legally guilty. Despite factual guilt, these persons are not convicted, an outcome not acceptable from the crime control standpoint.

A final rearrangement of these regions is appropriate for the discussion that follows. Defendants convicted at trial compose region i and part of region vi. Persons convicted by guilty plea fall in regions ii, iv, and part of vi. A nol pros would place an individual in region iii or v. We assume that the prosecutor refused to file charges in region vii.

The reader who was careful to follow the geometry can begin to see its normative significance. There is agreement between the models that i and ii should be maximized while iii and vi should be minimized. But from a due process perspective, v should be maximized while iv is minimized. From the crime control standpoint, the opposite should be the case.

Has a bogus conflict been introduced? Is it likely that the areas of conflict between crime control and due process are so small, so unlikely to occur, that the concern is moot? Measurement of the relative areas of i through vii is impossible with precision, but the material presented in Chapters 1 through 5 provides reasonable proxies for some of the due process and crime control concerns involved. With these measurements in mind, the extent of the conflict can be assessed.

To operationalize legal and factual guilt, the following approach was taken. Conviction at trial means legal guilt; acquittal means legal innocence. By definition, there can be no exceptions. Of course, this says nothing about the legal guilt or innocence of persons not going to trial. Here the regression estimates are essential. If the probability of conviction at trial was high, then the individual would likely be legally guilty. If, on the other hand, the probability of conviction was low, he would likely be legally innocent.

In individual cases, using the regression predictions to determine legal innocence or guilt is suspect; the predictions simply have too little accuracy. However, by averaging the estimated probabilities of conviction for a large number of defendants, it is possible to account accurately for the extent to which members of this group can be said to be legally innocent. Exactly this procedure was followed in Chapter 4, where findings led to two pertinent conclusions. First, area ii (legal guilt; factual guilt; conviction by plea) is probably about twice as large as area iv (legal innocence; factual guilt; conviction by plea), and area iii (dismissal of the legally and factually guilty) is comparable to area v (dismissal of the legally innocent).

These findings mean that plea bargaining is expected to increase the convictions of the factually guilty by reducing the number of criminal cases that are nolled. As such, plea bargaining is consistent with the crime control perspective. Plea bargaining also increases the conviction of the legally innocent by (1) increasing the conviction of persons who otherwise would have been dismissed and (2) by substituting guilty pleas for trials. In this instance, plea bargaining works against the normative prescriptions of the due process model. The conflict is clearly *not* moot; on the contrary, even though the estimates are approximations, they indicate that conviction of the *legally* innocent is likely to increase significantly along with conviction of the factually guilty.

POLICY IMPLICATIONS FOR CONFLICT RESOLUTION

There is ample reason for conflict between advocates of the due process and crime control perspectives. But emphasizing this difference may hide areas in which the two models should agree. For instance, both models should agree that an increase in the judicial system's ability to demonstrate legal guilt would be an

improvement, provided procedural regularity is assured and law enforcement does not become obtrusive. Can the ability to demonstrate legal guilt be increased, given current criminal justice technology? Earlier research of PROMIS data explicitly addresses this question and is worth summarizing here.

In a study of witness cooperation, Frank Cannavale demonstrated that prosecutors frequently are unable to establish legal guilt because of uncooperative witnesses.[1] Although Cannavale's main concern was that defendants are consequently often nol prossed, it is reasonable to believe that plea bargaining concessions also reflect the unavailability of witnesses. This suggests that a plea bargain secures convictions of the factually guilty, despite a relatively low probability of establishing legal guilt, and that "witness problems" are the reason why factual and legal guilt might differ.

Cannavale's insightful analysis has implications for present concerns. First, witnesses are forced to endure onerous conditions during criminal cases. These conditions range from lack of notification, crowded, uncomfortable witness rooms, and difficulties in locating the right courthouse, to a lack of concern by police and prosecutors for witness safety in the face of potential reprisals from defendants. A second problem illustrated by Cannavale is that the prosecutor's perception of the witness's willingness and ability to testify often appears to be erroneous. In a large number of cases in which the prosecutor cited "witness problems" as a reason for a dismissal, witnesses (who were interviewed as part of the study) recounted that they either were not aware of being a witness or were aware but were not asked to testify. The implication is that a demonstration of legal guilt can be increased by better handling of witnesses.

A study by Brian Forst, *et al.*, demonstrated that a minority of police officers make arrests leading to convictions.[2] Findings demonstrate that some officers are more adept at gathering physical evidence and securing witnesses. Forst suggests that if information was provided to police officers about how to make "good" arrests (i.e., arrests leading to conviction), the quality of evidence available to prosecutors would increase. Again, then, a mechanism is seen to exist that could increase the system's ability to establish legal guilt or innocence.

Convicting the factually guilty when legal guilt cannot be established creates friction between due process and crime control advocates. The point to be made from the Cannavale and Forst studies is that this friction can be reduced if evidence gathering and witness cooperation could be increased. Their studies have demonstrated that technology currently exists to accomplish this through improved police practices and witness handling. Thus, justice could be improved both from a crime control and a due process perspective. If the ability to increase demonstration of legal guilt was enhanced, less strain would arise in implementing policies to review plea bargains. At present, most judicial reviews appear to be cursory, and generally it is held that if a defense counsel agrees to a guilty plea, then legal guilt has been established. Findings in Chapter 4 show this presumption to be dubious, and that closer screening of criminal cases would likely result in fewer pleas being accepted. If greater incentives to assemble witnesses and evidence were provided, along with appropriate safeguards to prevent evidence fabrication, more intense judicial review of the merits of a guilty plea could reduce conviction of the legally innocent with little or no decrease in conviction of the factually guilty.

WEIGHING CRIME CONTROL AND DUE PROCESS CONCERNS

Although friction between due process and crime control advocates can be reduced, it is unreasonable to expect reconciliation of positions taken by these

two sides. As long as guilty pleas are accepted, with or without sentence concessions, persons who plead guilty would otherwise have had a chance of being acquitted at trial. Thus, even given technological improvements in evidence gathering and witness cooperation, some unknown number of legally innocent defendants can be expected to be convicted.

Given the cost of trials, it is reasonable to suppose that, despite due process concerns, guilty pleas will remain the dominant form of disposition of cases resulting in conviction. Moreover, the form of plea bargaining will be determined by compromise among crime control, due process, and economic concerns. It is therefore appropriate to close this study with a review of what plea bargaining accomplishes.

First, plea bargaining as it is practiced in the Superior Court of the District of Columbia reduces criminal activity. When sentencing concessions were exchanged for guilty pleas, the direct effect was to increase criminal activity, largely because of the *incapacitative* effect of imprisonment. However, when sentence concessions were awarded in robbery cases, the indirect ability of the guilty plea process to increase prosecutions and convictions was judged to offset increased crime resulting from sentence concessions. For three of the four high-volume offenses examined, guilty plea concessions were not awarded, and for these three, plea bargaining unambiguously decreased future crime.

Second, as was argued above, a guilty plea sometimes leads to conviction of the legally innocent—those persons who would be acquitted if tried. Just how these convictions should be weighed against the increased crime control that follows from plea bargaining is irresolvable. However, enhanced evidence gathering and procedures for improving witness cooperation would be consistent with both crime control and due process concerns.

Third, trials are extremely expensive relative to guilty plea settlements. In addition, the outcome of a guilty plea seems to approximate the outcome of a trial, at least so far as the ultimate sentence is concerned. As the probability of conviction at trial falls, the sentence received decreases, and probation becomes more likely. As the sentence expected at trial following conviction at trial increases, so does the severity of the sentence following a guilty plea. Plea bargaining is an inexpensive approximation to an expensive trial outcome; in addition, guilty plea negotiations may be superior to formal trials at determining factual guilt. In a world of scarcity, where public projects have to compete for limited resources, this economy alone may weigh heavily in the determination of plea bargaining policy.

Notes

1. Frank J. Cannavale, Jr., and William D. Falcon (ed.), *Witness Cooperation*, Institute for Law and Social Research (Lexington, Mass.: Lexington Books, 1977).

2. Brian Forst, Judith Lucianovic, and Sarah J. Cox, *What Happens After Arrest? A Court Perspective of Police Operations in the District of Columbia*, PROMIS Research Publication no. 4 (Washington, D.C.: INSLAW, 1977).

Technical Appendix

The findings reported in Chapters 3, 4, and 5 were based on regression analysis and non-parametric statistics. In this appendix, we discuss (1) the specification of the statistical models employed, (2) the derivation of the variables used in each model, and (3) the empirical results.

A general examination of statistical techniques is beyond the scope of this appendix but can be found in several suggested references. The multivariate PROBIT model is developed by McKelvey and Zavoina.[1] An overview of time series regression with autocorrelation and polynomial distributed lags appears in Johnston.[2] An introduction to rank order correlation can be found in Blalock.[3]

SENTENCING

In Chapter 4, the analysis required estimates of the sentence received by individuals convicted at trial. Sentences were categorized as probation, incarceration under the Federal Youth Corrections Act or Narcotics Rehabilitation Act, incarceration for a minimum period less than three years, and incarceration for a minimum period of three years or more. Explanatory variables were defendant characteristics, including criminal record, and aspects of the offense, including harm to persons and damage to property. Because probation authorities usually release persons following completion of the minimum sentence, the minimum sentence imposed corresponds closely to the sentence actually served.

Because the dependent variable (sentence severity) was measured on an ordinal scale, a form of PROBIT developed by McKelvey and Zavoina was used to estimate the probability of receiving a given sentence. In general, the model's specification is:

$$\Pr[Y_{ik} = 1] = \phi\left[\frac{\mu_k - \beta_0 - \Sigma\beta_j X_{ij}}{\sigma}\right] - \phi\left[\frac{\mu_{k-1} - \beta_0 - \Sigma\beta_j X_{ij}}{\sigma}\right]$$

where ϕ represents the cumulative standard normal density function. The μ and β's are parameters estimated using maximum likelihood techniques. The parameter μ_1 is set equal to zero; σ is set equal to one (this serves to fix the units). $\Pr[Y_{ik} = 1]$ is the probability that the i^{th} observation of the dependent variable falls into class k where:

y_{i1} equals one if the i^{th} defendant was sentenced to probation.

y_{i2} equals one if the i^{th} defendant was sentenced under the Federal Youth Corrections Act (receiving a sentence other than probation) or if the defendant was sentenced under the Narcotics Rehabilitation Act.

y_{i3} equals one if the i^{th} defendant was sentenced to incarceration with a minimum term of less than three years.

y_{i4} equals one if the i^{th}th defendant was sentenced to incarceration with a minimum term of three years or more.

x_{i1} equals one if the i^{th} defendant was released on personal recognizance prior to trial (ROR).

x_{i2} equals one if the defendant was a male (SEX).

x_{i3} equals the defendant's age in years (AGE).

x_{i4} equals one if a gun was present at the time of arrest (GUN).

x_{i5} harm to the victim: coded zero for none or threat only, coded one if there were minor injuries, coded two if victims were treated and released, coded three if victims were hospitalized. The most serious harm done determined the category coded (HARM).

x_{i6} dollar value of property stolen, damaged, or destroyed: coded zero for none, coded one for under $10, coded two for between $10 and $200, coded three for between $250 and $2,000, and coded four if in excess of $2,000 (DOLLAR VALUE).

x_{i7} number of previous arrests for crimes against persons (CRIMES AG PERS).

x_{i8} number of previous arrests for crimes against property (CRIMES AG PROP).

x_{i9} number of charges (CHARGES).

Data used in the regressions include all defendants who were (a) charged by the police with one of the following four offenses: assault (armed assault, simple assault, and assault on a police officer), robbery (armed and other), larceny, or burglary; and (b) who were convicted at trial. Listwise deletion of cases with missing data was used.

For assault, data were considered missing if there was no indication that anyone was threatened or harmed by the criminal act. For the other three offenses, it was impossible to distinguish between zero values (indicating no threat or harm) and missing data; thus, "no information" was always considered as "no harm." This assumption undoubtedly biases the data; with respect to assault, we estimated that in 5 to 10 percent of the instances in which some type of harm occurred no data entry was made.[4] If this underreporting is representative of the other three offenses, the importance of "harm" would be understated in the regression equations. The same problem likely exists with the variable "property loss," although no reasonable estimate for the amount of error exists.

Alternative specifications were used in an attempt to estimate the severity of the sentences received following conviction at trial. Race was originally included in the regression equations, but it was eliminated because almost all the offenders in the data base were black.[5] Likewise, adding the square of the defendant's age did not increase explanatory power.[6] A dummy variable representing forced entry was included in early specifications; it was eventually excluded because it failed to increase the model's explanatory power. Also, separate dummy variables were used for each "harm" category, and "harm" was expanded to include "threats." Using separate dummy categories failed to increase the model's explanatory

power significantly, while inclusion of "threats" tended to mask the effect of harm to persons. Finally, no additional explanatory power resulted from including information about weapons, other than guns, in the specification.

The regression results reported in Table A.1 were derived from what were considered to be parsimonious specifications. A one-tailed test of statistical significance was used, and statistical significance was determined at .05 and .10 levels of confidence. The statistic χ^2 equals minus two times the log likelihood ratio, where the latter was determined by comparing the likelihood of the fully specified model against the likelihood of the model with β_i constrained to equal zero. The summary statistic, R^2, is the square of the multiple correlation coefficient and has an interpretation analogous to that of its counterpart in ordinary least squares regression. In addition, Table A.1 presents the proportion of cases predicted correctly and the expected value of the proportion that would be predicted by chance.[7]

Qualitatively, the estimates appearing in Table A.1 conformed to expectations; the severity of the sentence received generally increased with the seriousness of

Table A.1.
Regression Results on Sentencing Offenders Convicted at Trial

Explanatory Variables	Regression coefficients and asymptotic z scores			
	Assault	Robbery	Larceny	Burglary
Constant	−1.79**	−1.28**	−1.85**	−0.20
	(2.74)	(1.90)	(3.1)	(.43)
ROR	−0.42*	−0.48**	−0.55**	−0.33*
	(1.42)	(2.19)	(2.66)	(1.37)
SEX	0.25	0.46	1.14**	***
	(.55)	(.99)	(2.30)	
AGE	0.03	0.04**	−0.01	−0.02
	(.21)	(1.83)	(.36)	(.97)
GUN	0.47*	.18	***	0.57*
	(1.47)	(.83)		(1.49)
HARM	.20*	−.12	***	0.29*
	(1.51)	(.76)		(1.69)
DOLLAR VALUE	0.30*	0.23**	0.30**	0.15**
	(1.32)	(2.49)	(2.71)	(1.66)
CRIMES AG. PERS	0.11*	0.07**	0.04*	−0.07
	(1.56)	(1.99)	(1.37)	(1.24)
CRIMES AG. PROP	0.03	0.04*	0.02	0.06**
	(.75)	(1.31)	(.87)	(2.28)
CHARGES	0.09	0.11**	0.08	0.09**
	(1.22)	(3.44)	(1.12)	(1.97)
χ^2	15.87*	52.86**	30.08**	33.46**
R^2	.23	.38	.28	.30
% Pred. Corr.	76%	46%	69%	56%
% Corr. by Chance	64%	27%	54%	33%
N of cases	113	157	185	123

Notes:
*Significant at $p < .10$
**Significant at $p < .05$
***Gun and harm were infrequently elements of the offense (larceny); virtually all burglars were male

the offense and the defendant's criminal history. Using these estimates, an algorithm was constructed to *predict* the probability of each type of sentence for defendants convicted by guilty plea *assuming* that these defendants would be sentenced with the same severity as defendants, with the same characteristics, who were convicted at trial. These estimates were then used to estimate the expected value of the proportion of guilty plea defendants who would have received each type of sentence. The expected values of these proportions were compared with the *observed* proportions to determine the extent to which guilty plea convictions led to sentence concessions. Results from these comparisons are reported and discussed in Chapter 4.

THE PROBABILITY OF CONVICTION

It was necessary to estimate the probability of various prison sentences for defendants convicted at trial in order to *predict* the sentences that would have been received by defendants who actually pled guilty, or were dismissed, if they had instead gone to trial. In addition, we wanted to estimate the probability of conviction for defendants going to trial and use those estimates to draw inferences about defendants entering guilty pleas and being dismissed.

PROBIT was again used to estimate the probability of conviction. The general form of the model was:

$$\Pr[W_{i1} = 1] = \phi\left[\frac{-\alpha_o - \Sigma\alpha_j x_{ij}}{\sigma}\right]$$

$$\Pr[W_{i2} = 1] = 1 - \Pr[W_{i1} = 1]$$

where $\Pr[W_{i1} = 1]$ is the probability of being convicted at trial; ϕ represents the cumulative standard normal density function. The standard deviation, σ, is arbitrarily set equal to one. In addition:

W_{i1} equals one if i^{th} defendant was convicted at trial.

W_{i2} equals one if the i^{th} defendant was acquitted at trial.

x_{i1} the defendant's age in years (AGE).

x_{i2} coded one if the defendant was arrested the same day the offense was committed (SAME).

x_{i3} coded one if physical evidence was available (PHYSE).

x_{i4} the number of charges (CHARGES).

x_{i5} coded one if the defendant was arrested at the scene of the offense, although not necessarily at the same time as the offense occurred (SCENE).

x_{i6} the number of lay witnesses (LAYWIT).

x_{i7} coded one if the defendant was released on personal recognizance (ROR).

x_{i8} coded one if the defendant was granted a third-party release (SR).

x_{i9} coded one if there was corroboration that a crime was committed (CORROB).

x_{i10} coded one if exculpatory evidence was present (EXCULP).

Alternative specifications were attempted and rejected because they lacked explanatory power (using a likelihood ratio test as a criterion).[8] These alternative specifications included the above variables and the following ones:

1. The screening prosecutor's estimate of the probability of conviction. A question was posed to the screening prosecutor, asking him the "probability of winning" the case. Allowable responses were: poor (under 50%); fair (50%-75%); good (75%-90%); and excellent (90%-100%). In one specification, the category mean was used as an explanatory variable. In an alternative specification, dummy categories were created for each response category. In neither case were the results statistically significant, and in some cases, the regression coefficients were in the wrong direction.

2. Availability of an eye witness; availability of a complaining witness. The number of lay witnesses was refined to reflect whether eye witnesses and complaining witnesses were available. If so, a dummy variable was created for each category. Results were not statistically significant.

3. The seriousness of the offense. The estimates from the sentencing regression equations were used as weights for the seriousness of the offense. This did not appear to lend additional explanatory power to the model.

We believed that release on personal recognizance was more likely for weaker cases; that evidence corroborating the fact that a crime had been committed was likely to increase the probability of conviction, while exculpatory evidence decreased the probability; and that the number of charges increased the probability of conviction. Therefore, a one-tailed test of significance was used for these four variables (at .10 and .05 levels of confidence). However, initial analysis showed no definite patterns with respect to the signs of the other variables. Note especially that the probability of convicting accused burglars *decreased* both with the availability of physical evidence and with the number of lay witnesses (in contrast to robbery convictions). It seems that either (a) the remaining variables are proxies for other elements of the offense or (b) the evidence may be used by the defense as well as the prosecutor.[9] Because it was impossible to predict direction for these variables, a two-tailed test of statistical significance was employed (again at .10 and .05 levels of confidence).

Estimates are reported in Table A.2. These estimates were used to predict the probability of conviction at trial for criminal cases that were actually terminated by guilty plea or dismissal. Findings appear in Chapter 4.

RECIDIVISM

In order to answer the question "Who gains and who loses from plea bargaining?" it was necessary to measure recidivism for defendants who appeared in the D.C. Superior Court in 1974. The algorithm used to determine future criminal behavior proceeded as follows:

1. All arrests for assault, burglary, larceny, and robbery were examined if the arrest occurred in 1974.

2. All arrests in 1974, 1975, and 1976 were examined to determine whether persons arrested in these years had also been arrested earlier in 1974.

3. If the person arrested in 1974–76 had been arrested earlier in 1974, then the 1974–76 arrest was examined to see if it occurred within two years following the disposition of the 1974 case. The first arrest that fit this criterion was used as the indicator of recidivism. Third and subsequent arrests were ignored since freedom to commit a third crime was more contingent on the handling of the offender's second offense than it was on the handling of the first offense.

4. Having made this match, the 1974 data file was again examined. If an individual appeared more than once in the data file, only the first arrest was used in the analysis.

5. Ultimately, then, the data file consisted of the first arrest in 1974 of individuals arrested for assault, burglary, larceny, or robbery. Data included information

Table A.2.
Regression Results on the Probability of Conviction for Defendants Going to Trial

Explanatory Variables	Regression coefficients and asymptotic z scores			
	Assault	Robbery	Larceny	Burglary
Constant	.24	.60	−.23	1.65**
	(.57)	(1.23)	(.46)	(2.72)
AGE	−.005	−.04**	−.00	−.01
	(.61)	(2.46)	(.03)	(1.17)
SAME	−.97**	−.05	.36	−.45
	(2.90)	(.14)	(1.27)	(1.20)
PHYSE	.05	.79**	−.34	−.42*
	(.22)	(2.56)	(1.18)	(1.82)
CHARGES	.22**	−.02	.18**	.07*
	(2.94)	(.39)	(1.64)	(1.43)
SCENE	.78**	.23	.32	−.05
	(2.61)	(.78)	(1.45)	(.14)
LAYWIT	−.05	.38**	−.02	−.25**
	(.60)	(2.65)	(.22)	(2.20)
ROR	−.28*	−.57**	.06	−.53**
	(1.45)	(2.00)	(.35)	(2.11)
SR	.40	−.50	−.30	−.16
	(1.11)	(1.32)	(.91)	(.52)
CORROB	.26*	.66**	.27*	.46**
	(1.39)	(2.51)	(1.57)	(1.93)
EXCULP	.09	−.36	−.54	−1.23**
	(.14)	(.71)	(1.11)	(2.42)
χ^2	27.2**	31.6**	14.1	25.8**
R^2	.21	.37	.10	.26
% Pred. Corr.	68%	79%	70%	67%
% Corr. by Chance	54%	65%	56%	55%
N of cases	234	174	268	169

Notes:
*Significant at .10
**Significant at .05

pertaining to the first offense that these individuals committed within a two-year period following disposition of the original case.

A similar algorithm was used to determine the future judicial processing resulting from new arrests. Findings are reported in Chapter 4, accompanied by χ^2 statistics. The χ^2 statistics are measures of the statistical significance generally used in contingency table analysis.

WORK LOADS AND CASE DISPOSITIONS

A distributed lag model was used to test the hypothesis that short-run changes in work loads affect the processing of criminal cases. The model assumed a "polynomial" lag with the following specification for the regression equation:

$$\left.\begin{matrix} PROS_t \\ \\ TRIAL_t \end{matrix}\right\} = \beta_0 + \sum_{i=1}^{L} \beta_i x_{t-i} + u_t$$

where:

$$PROS_t = \frac{\text{(number of cases nolled during week t + number of cases dismissed for lack of prosecution during week t)}}{\text{(number of cases nolled during week t + number of cases dismissed for lack of prosecution during week t + number of guilty pleas during week t + number of trials during week t)}}$$

$$TRIAL_t = \frac{\text{number of trials during week t}}{\text{number of guilty pleas during week t}}$$

x_t = the value of the independent variable x (alternatively trials, cases filed, and arrests) during period t

$$\beta_i = \alpha_0 + \sum_{j=1}^{D} \alpha_j i^j \qquad i = 1 \ldots L$$

L = the number of lags assumed in the model

D = the degree of the polynomial used to approximate the parameters $\beta_1 \ldots \beta_L$

$u_t = \delta u_{t-1} + v_t$ is a disturbance term subject to first order serial correlation, with $0 \leq \delta \leq 1$, and v_t is normally distributed with $E(v_t) = 0$ and $E(v_t v_{t-k}) = 0$ if $k \neq 0$ and $E(v_t v_{t-k}) = \sigma^2$ if $k = 0$.

The actual regression estimated had the general form:

$$\left.\begin{matrix} PROS_t \\ TRIAL_t \end{matrix}\right\} = \alpha_0 + \alpha_1 \left[\sum_{i=1}^{L} x_{t-i} - \delta \sum_{i=2}^{L+1} x_{t-1} \right] +$$

$$\alpha_2 \left[\sum_{i=1}^{L} i \cdot x_{t-1} - \delta \sum_{i=2}^{L+1} (i-1)\, x_{t-i} \right] + \cdot + \cdot +$$

$$\alpha_D \left[\sum_{i=1}^{L} i^D x_{t-1} - \delta \sum_{i=2}^{L+1} (i-1)^D x_{t=1} \right] + v_t$$

Various values of L, D and δ were used in an attempt to determine a good fit. None yielded a statistically significant correlation between work loads and case dispositions.

WHY GUILTY PLEAS OCCUR

Why do guilty pleas occur? In an attempt to answer this question, we first estimated the probability of a defendant's receiving a charge reduction. Since the dependent variable—the occurrence of a charge reduction—was measured on a nominal level, we again used the PROBIT model to test for statistical significance. The general specification of the model is

$$\Pr[R_{i1} = 1] = \phi\left[\frac{-\gamma_0 - \gamma_1 PA_i - \gamma_2 PC_i - \gamma_3 SENT - \gamma_4 ROR_i}{\sigma}\right]$$

$$\Pr[R_{i2} = 1] = 1 - \Pr[R_{i1} = 1]$$

where:

R_{i1} = 1 if the i^{th} defendant received no charge reduction

R_{i2} = 1 if the i^{th} defendant received a charge reduction

PA_i = the probability of acquittal as determined from the regression described in the first section of this (appendix Prob. of Acquittal)

PC_i = the probability of conviction, as estimated by the prosecutor at the time of case screening (Prob. of Conviction)

SENT= the probability of receiving probation following conviction at trial, as determined from the regressions described in the second section of this appendix (Prob. of Probation)

ROR = coded one if the i^{th} defendant was released on personal recognizance.

Data consisted of all defendants who (a) had been charged by the police with robbery, burglary, or assault and (b) had been convicted by guilty plea. The examination was not extended to larceny because this offense infrequently resulted in charge reductions. A one-tailed test of statistical significance was used, since it was expected that a charge reduction would be likely for defendants with a high probability of acquittal, for defendants released on personal recognizance prior to trial, and for defendants with a high likelihood of receiving probation if convicted at trial. In contrast, the likelihood of a charge reduction was expected to be inversely related to the probability of conviction as estimated by the screening prosecutor.[10]

Regression results are reported in Table A.3. It is interesting to note that the regression equations seem to explain the charge reduction decision for robbery and, to a lesser extent, for assault, but not for burglary. For robbery, charge reductions are more frequently rewarded to those defendants who (a) have a lower probability of conviction at trial and (b) are more likely to receive probation if convicted at trial. The probability of being acquitted seems to matter for assault cases; since almost everyone receives probation (or a short sentence) if convicted of assault, it is not surprising to discover that the probability of probation was not statistically significant in this regression. There is no evidence that any of these factors matters for burglary cases.

Next, we attempted to explain the sentence received following a guilty plea as a function of the probability of acquittal at trial and the probability of receiving a term of probation if convicted at trial (along with whether the defendant was released on personal recognizance and whether he received a charge reduction). We were led to believe that sentence severity would decrease with the probability

Table A.3.
Regression Results on Charge Reductions

Explanatory Variables	Regression coefficients and asymptotic z scores		
	Assault	Robbery	Burglary
Prob. of Acquittal	1.77*	1.20*	0.04
	(2.53)	(2.74)	(.10)
Prob. of Probation	.54	1.64*	.03
	(.64)	(3.48)	(.08)
Prob. of Conviction	.00	−0.03*	.00
	(.01)	(2.42)	(.50)
ROR	−.42**	−0.00	.15
	(1.73)	(.01)	(.98)
Constant	−2.03	−.28	−1.17
	(2.41)	(.64)	(2.77)
χ^2	8.17***	35.68*	1.66
R^2	.08	.16	.01
N of cases	270	380	499

Notes:
*Significant at .01
**Significant at .05
***Significant at .10

of acquittal at trial, and with the probability of probation following conviction at trial. An increase in the screening prosecutor's estimate of the probability of conviction was expected to increase sentence severity. Since the release-on-recognizance interview identifies the defendants with more stable community ties, it was anticipated that defendants receiving ROR would also receive lighter sentences; likewise, a charge reduction was expected to reduce sentence severity. Since we were able to predict the direction of the coefficients, a one-tailed test of significance was used.

Data included all defendants who (a) were convicted by guilty plea and (b) were accused by the police of assault, robbery, larceny, or burglary. Cases with missing data were excluded from the analysis. The structural form of the regression equation is:

$$\Pr[Y_{ik} = 1] = \phi\left[\frac{u_k - \xi_0 - \xi_1 PA_i - \xi_2 PC_i \xi_3 SENT_i - \xi_4 ROR_i - \xi_5 R_{i2}}{\sigma}\right]$$

where all variables were defined earlier. Table A.4 reports the results.

Findings tended to conform to expectations. The probability of acquittal was negatively associated with sentence severity (assault and robbery), while the probability of conviction was positively associated (larceny) with sentence severity. The most important variable was the probability of receiving probation following conviction at trial; this was always negatively correlated with sentence severity. As was expected, defendants released on recognizance did better at sentencing (larceny and burglary), but interestingly, a charge reduction neither increased nor decreased sentence severity.

Table A.4.
Regression Results on the Sentence Received Following Conviction by Guilty Plea

Explanatory Variables	Regression coefficients and asymptotic z scores			
	Assault	Robbery	Larceny	Burglary
Constant	2.18*	.70**	.01	.17
	(3.03)	(1.79)	(.02)	(.50)
Prob. of Acquittal	−.92**	−.76**	.39	.45
	(1.45)	(1.92)	(.75)	(1.39)
Prob. of Probation	−3.81*	−2.25*	−2.11*	−.92*
	(5.37)	(5.52)	(6.25)	(3.00)
Prob. of Conviction	−.00	.00	.01*	.00
	(25)	(.74)	(2.84)	(1.05)
ROR	.15	−.17	−0.37*	−.51*
	(.67)	(1.05)	(2.91)	(3.96)
Reduction	.15	−.12	.42	−.10
	(.48)	(.85)	(1.79)	(.69)
χ^2	45.37*	62.3*	106.1*	38.2*
R^2	.27	.20	.24	.10
N of cases	257	361	671	466

Notes:
*Significant at .01
**Significant at .05
***Significant at .10

Finally, we attempted to determine why trials occur. Anecdotal evidence led to the belief that defendants who were more likely to be convicted at trial would also be more likely to enter a guilty plea. Therefore, it was expected that the probability of acquittal would be negatively correlated, and the probability of conviction would be positively correlated, with the decision to plead guilty. We had no *a priori* expectations with respect to the probability of probation following conviction at trial, nor with respect to being released on personal recognizance.

All defendants whose cases were disposed of by guilty plea or by trial were included in the analysis. Once again, cases with missing data were excluded from the analysis. Since the dependent variable was binary, PROBIT was used to estimate the effects of the variables of interest. The general specification of the regression model was as follows:

$$\text{PR[PLEA} = 0] = \phi\left[\frac{-\delta - \delta_1 \text{PA}_i - \delta_2 \text{PC}_i - \delta_3 \text{SENT} - \delta_4 \text{ROR}_i}{\sigma}\right]$$

$$\text{Pr[PLEA} = 1] = 1 - \text{Pr[PLEA} = 0]$$

where PLEA equals one when the i^{th} defendant entered a guilty plea.[11] Other variables were defined earlier. Results are reported in Table A.5.

As was expected, the probability of a guilty plea decreased with the probability of acquittal (robbery) and increased with the probability of conviction (for larceny and marginally for assault). However, the measure of association, R^2, ranged from .01 to only .08, indicating that very little is explained about the decision to enter a guilty plea.

Table A.5.
Regression Results on the Decision to Go to Trial

Explanatory Variables	Regression coefficients and asymptotic z scores			
	Assault	Robbery	Larceny	Burglary
Constant	1.30	.29	.33	.84
	(2.68)	(.80)	(1.04)	(2.38)
Prob. of Acquittal	.21	−1.02	−.41	−.06
	(.48)	(2.98)	(.96)	(.16)
Prob. of Probation	−2.11	.31	−.38	−.39
	(4.00)	(.84)	(1.30)	(1.21)
Prob. of Conviction	.01	.00	.01	.00
	(1.28)	(1.06)	(3.02)	(.35)
ROR	.34	.05	.05	−.01
	(2.25)	(1.06)	(.48)	(.11)
χ^2	19.2	12.0	12.0	2.2
R^2	.08	.04	.02	.01
N of cases	446	554	977	668

Notes

1. R. McKelvey and W. Zavoina, "A Statistical Model for the Analysis of Ordinal Level Dependent Variables," *Journal of Mathematical Sociology* 4 (1975): 103–120.
2. John Johnston, *Econometric Methods*, 2nd ed. (New York: McGraw-Hill, 1972): 294–300.
3. Herbert M. Blalock, Jr., *Social Statistics*, 2nd ed. (New York: McGraw-Hill, 1972): 415–18.
4. This assumes that either a threat of harm or actual personal harm must be an element of an assault. As a result, a blank must be because data are missing.
5. The population of the District of Columbia is predominantly black; blacks were disproportionately arrested for criminal offenses.
6. There is a potential specification problem with the regression equation. It is our expectation that sentence severity increases with age, *ceteris paribus*. Moreover, the second sentence category is reserved for youthful offenders. Quite possibly, the effect of age is not monotonic, but adding the square of age did not improve the fit.
7. See note 7, Chapter 4, for a discussion of how the expected value of the proportion predicted by chance was determined.
8. The social relationship between the victim and the defendant and whether there was provocation or participation by the victim had no significant impact on the probability of conviction at trial. Kristen M. Williams, personal communication.
9. As an illustration, the availability of a lay witness in a burglary offense may indicate a more "trivial" offense, such as that of a friend stealing from a friend. On the other hand, the lack of a lay witness may more typically indicate a nighttime burglary of, say, a warehouse in which there was no witness present.
10. See William M. Landes, "Legality and Reality: Some Evidence on Criminal Procedure," *Journal of Legal Studies* 3 (1974): 287.
11. A nonlinear specification was attempted by creating dummy variables for a probability of acquittal between .00 and .09, .10 and .19, etc. No patterns were detected.

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