

FINAL DRAFT

THIS PAPER IS IN PREPUBLICATION
FORM. NOT FOR QUOTATION OR REPRO-
DUCTION WITHOUT THE CONSENT OF
THE AUTHOR.

PROMIS RESEARCH PROJECT

PUBLICATION 10

THE SCOPE AND PREDICTION OF RECIDIVISM

August 25, 1978

Kristen M. Williams

Institute for Law and Social Research
1125 Fifteenth Street, N.W.
Washington, DC 20005

This project was supported by Grant Numbers 74-NI-99-0008,
75-NI-00-0111, 76-NI-99-0118, and 77-NI-99-0060, awarded by
the Law Enforcement Assistance Administration, U.S. Depart-
ment of Justice, under the Omnibus Crime Control and Safe
Streets Act of 1968, as amended. Points of view or opinions
stated in this document do not necessarily represent the
official position or policies of the U.S. Department of
Justice.

56558

Copyright © Institute for Law and Social Research, 1978

Reproduction in whole or in part permitted for any purpose of the Law Enforcement Assistance Administration of the U.S. Department of Justice, or any other agency of the United States Government.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage or retrieval system, without permission in writing from the Institute for Law and Social Research.

TABLE OF CONTENTS

I.	Introduction	I-1
II.	Background	II-1
	A. Earlier Research on Recidivism	II-1
	B. Recidivism in the District of Columbia	II-8
III.	The Defendants in This Analysis	III-1
	A. Selection of the Panel	III-1
	B. Personal Characteristics	III-2
	C. Criminal History at the Time of the Panel Case	III-6
	D. Types of Crime for Which Defendants Were Arrested	III-8
IV.	Variables Associated With Future Recidivism	IV-1
	A. Measures of Recidivism	IV-1
	B. Predicting the Seriousness and Frequency of Recidivistic Events	IV-5
	1. The Arrest Recidivism Index	IV-6
	2. The Prosecution Recidivism Index	IV-12
	3. The Conviction Recidivism Index	IV-13
	C. The Distinction Between Felonies and Misdemeanors	IV-15
	D. The Accuracy With Which Recidivism Can Be Predicted	IV-19
V.	Case-Processing Decisions and Recidivism	V-1
	A. The Effect of Final Disposition on Recidivism	V-1
	B. The Effects of Successful Diversion on Recidivism	V-5
	C. Special Assignment of Misdemeanor Cases to the Major Violator's Unit	V-8
VI.	Patterns of Crime Switching	VI-1
VII.	Summary and Implications for Further Research	VII-1
Appendix A	Additional Data Added to the Panel File	A-1
Appendix B	Multivariate Analysis of the Probability of Recidivism	B-1

LIST OF EXHIBITS

Exhibit 1	Proportion of Total Arrests in a 56-Month Period Accounted for By Defendants with One or More Arrests (Washington, D.C.)	II-10
Exhibit 2	Proportion of Total Accepted Cases in a 56-Month Period Accounted for by Defendants with Two or More Accepted Cases (Washington, D.C.)	II-12
Exhibit 3	Proportion of Total Convictions in a 56-Month Period Accounted for by Defendants with Two or More Convictions (Washington, D.C.)	II-13
Exhibit 4	Age of Panel Defendants at Time of Panel Case (Washington, D.C.)	III-4
Exhibit 5	Criminal Records of Panel Defendants Prior to Panel Case (Washington, D.C.)	III-7
Exhibit 6	Types of Crimes for Which Defendants Were Arrested in Panel Cases (Washington, D.C.)	III-9
Exhibit 7	Factors Predicting the Seriousness and Frequency of Future Rearrests: Washington, D.C.	IV-7
Exhibit 8	Factors Predicting the Seriousness and Frequency of Future Rearrests: Washington, D.C.	IV-9
Exhibit 9	Factors Influencing the Seriousness and Frequency of Repapered Cases After a Papered Case: Washington, D.C.	IV-14
Exhibit 10	Factors Predicting the Seriousness and Frequency of Reconvictions After a Conviction: Washington, D.C.	IV-16
Exhibit 11	Factors Predicting the Seriousness and Frequency of Future Rearrests After a Felony Arrest: Washington, D.C.	IV-18
Exhibit 12	Factors Predicting the Seriousness and Frequency of Future Rearrests After a Misdemeanor Arrest: Washington, D.C.	IV-20

- Exhibit 13 Percentage of Defendants Rearrested After Panel Case According to the Final Disposition of the Panel Case (Washington, D.C.) V-2
- Exhibit 14 Proportion of Defendants Rearrested for a Felony or Misdemeanor According to Whether the Initial Arrest was a Felony or Misdemeanor: Superior Court, District of Columbia VI-3
- Exhibit 15 Specialization of Defendants in the Same Type of Crime (Washington, D.C.) VI-5
- Exhibit 16 Percentage of Defendants Rearrested After the Panel Case for a Violent, Property, or Victimless Crime (Washington, D.C.) VI-8
- Exhibit 17 Types of Crimes for Which Defendants Were Rearrested After the Panel Case According to Crime Type of the Panel Case: Washington, D.C. VI-11

I. INTRODUCTION

In Washington, D.C., and in other urban areas throughout the United States, concern about "career criminals" has been on the rise. A career criminal is presumed to lead an active criminal life, committing many crimes, but being apprehended and convicted less frequently. The Law Enforcement Assistance Administration (LEAA) sponsors a national career criminal program that provides funds to prosecutors' offices in support of local programs that target on defendants who are repeatedly arrested for serious crimes. Selection criteria for the program vary from place to place. Usually, however, the criteria reflect the seriousness of the arrestee's current offense and past criminal behavior. Who should be in the target group? What are the characteristics of a career criminal? What factors predict the likelihood of serious criminal activity in the future?

This report examines the official records of arrestees in one urban area--the District of Columbia--in order to determine who comes into the court system again and again and what characteristics are associated with repeated contact with the criminal justice system. Career criminals who are never, or only infrequently, caught are not the focus of this report. The focus instead is on those who are repeatedly re-arrested, re-prosecuted, and re-convicted.

The purpose of the study is more practical than theoretical. Instead of looking for the root causes of recidivism, we have tried to assemble the best predictors of recidivism, based on what can be readily learned about a defendant at case intake and screening. It should be kept in mind that the variables presented as predictors were found to be associated with future recidivism. Why they are associated with recidivism and whether they are standing in for deep-seated causes are in large part beyond the scope of this report.

The study is based on data available over several years from PROMIS, installed in the Superior Court Division of the U.S. Attorney's Office for the District of Columbia. For each arrest, information about the defendant, the offense, the victim, the witnesses, court proceedings, and final disposition are collected and stored in PROMIS. For this analysis, all the PROMIS data for a sample group of 4,703 arrestees were assembled for a 56-month period. Throughout the analysis, several definitions of recidivism (that is, rearrest, re-prosecution, reconviction) are used in an effort to measure both the seriousness and frequency of an individual's criminal behavior.

Chapter II briefly discusses some of the earlier research on recidivism and describes the recidivism problem in the District of Columbia. In Chapter III, the selection of the

defendants to be studied is outlined, and descriptive statistics on their criminal histories and personal characteristics are presented. Chapter IV addresses the issue of predicting the seriousness and frequency of a defendant's future contact with the criminal justice system. The results of statistical analyses of factors that predict rearrest, reprosecution, and reconviction for felonies and misdemeanors are presented separately. Chapter V presents data on the effects on recidivism of various actions taken by the criminal justice system. Chapter VI examines the extent to which career criminals specialize in certain types of criminal activity. The final chapter presents the findings and policy implications of the study, and suggests avenues for future research.

II. BACKGROUND

A. EARLIER RESEARCH ON RECIDIVISM

Despite current public concern over career criminals, research on recidivism is not a new field. Most relevant to the work in this report are the numerous predictive studies of recidivism after parole from prison, which date back to Warner's 1923 study of the success or failure of parolees in Massachusetts.¹

In general, the early parole studies analyzed the association among characteristics of the criminal, the crimes for which he was convicted, his institutional experiences, and his recidivism or "parole failure." Based on the characteristics of the sample of defendants who recidivated, scores were developed to predict the recidivism of a new group. These scores were used to form predictive tables, sometimes called "experience" tables because they are based on the experience of an earlier group of defendants.

At first, defendant scores were computed as the sum of the characteristics each inmate possessed that were found to be associated with recidivism. The methodology of the early studies was based on simple tables that showed the relationship between recidivism and a single independent variable, such as age. Multiple regression analysis, which controls

¹Early parole studies are discussed and summarized in Hermann Mannheim and Leslie T. Wilkins, Prediction Methods in Relation to Borstal Training (London: Her Majesty's Stationery Office, 1955). An updated summary is found in Frances H. Simon, Prediction Methods in Criminology (London: Her Majesty's Stationery Office, 1971).

for the influence of many independent variables simultaneously (for example, age, employment, and type of crime for which convicted), did not emerge as an analytic technique until the 1950s. The method of looking at the success or failure of a given group of parolees became known as the "base expectancy" approach. As analytic techniques became more sophisticated, the results of multiple regression analyses were used to form weighted scores predicting parole success or failure.² (All of these parole studies, which number over 4,000, are currently being reviewed by Martinson and Wilks of the Center for Knowledge in Criminal Justice Planning.)³

Another development in the prediction of recidivism was the shift from regression analysis to "configuration" analysis, which can involve a number of different techniques. The basic form consists of a branching tree, based on defendant characteristics, that divides the sample population into groups ranging from those having low recidivism rates to

² For example, see Peter Hoffman and James L. Beck, "Parole Decision-making: A Salient Factor Score," Journal of Criminal Justice, vol. 2, no. 3 (1974), pp. 195-206.

³ Martinson and Wilks have indicated that they are specifically interested in pursuing findings from their earlier research that indicated that rehabilitation does not "work." (Douglas Lipton, Robert Martinson, and Judith Wilks, The Effectiveness of Correctional Treatment [New York: Praeger, 1975].) These results have been used to support the position that incarceration should be used for punishment or incapacitation, not rehabilitation.

those having high rates.⁴ For example, first offenders arrested for assault who are over 45 years old, would be good candidates for parole, while offenders with eight prior convictions and a drug history would be poor risks. The advantage of configuration analysis is that it can explicitly take into account the interaction between the independent variables. However, interaction terms also can be tested in regression analysis. Comparisons between predictions based on regression and those based on configural analysis do not seem to show any difference in predictive power when tested on a third sample.⁵ Simon tested many different techniques and concluded that in practice they all worked about equally as well.⁶

Incorporated in PROMIS is a weighted defendant score based on the results of a parole study in California.⁷ The score is computed using information collected at the

⁴For example, see Anthony Meade, "Seriousness of Delinquency, the Adjudicative Decision and Recidivism--a Longitudinal Configuration Analysis," The Journal of Criminal Law and Criminology, vol. 64, no. 4 (1973), pp. 478-85.

⁵Dean V. Babst, Don M. Gottfredson, and Kelley B. Ballard, Jr., "Comparison of Multiple Regression and Configural Analysis Techniques for Developing Base Expectancy Tables," Journal of Research in Crime and Delinquency, vol. 5, no. 1 (January 1968), pp. 72-80.

⁶Frances H. Simon, "Statistical Methods of Making Prediction Instruments," Journal of Research in Crime and Delinquency, vol. 5, no. 1 (January 1968), pp. 72-80.

⁷Donald M. Gottfredson, "The Base Expectancy Approach," in Norman Johnston, et al. (eds.), The Sociology of Punishment and Correction, 2nd ed. (New York: Wiley, 1970), pp. 807-13.

prosecutor's initial screening of the case. The original weighted score, adjusted for use in the PROMIS data base in the District of Columbia, is shown below. Subsequent to the transfer of PROMIS to other jurisdictions, the score was revised, and the items on auto theft, opiate use, alcohol abuse, and employment were eliminated.

Original PROMIS Weighted Defendant Score
(Washington, D.C.)

<u>Criteria</u>	<u>Weight</u>
Arrested in past five years	+10
At least one previous arrest	+5
At least one previous arrest for crimes against persons	+5
First arrest for auto theft	+2.5
Indication of opiate use at any time	+5
Indication of alcohol abuse	+2.5
Alias ever used	+2.5
Present job held for less than six months	+2.5

Research has not been available until this report on whether the characteristics found to predict parole failure in California are related to recidivism in the District of Columbia. The population of criminals analyzed in the California study and this study differ in a number of respects. Perhaps the most important is that this analysis includes all arrestees handled by the adult system, not just those who have

been convicted and incarcerated. There is reason to expect that results from an analysis of arrested persons would differ considerably from those of an analysis of only incarcerated persons. Because a population of arrested persons presumably includes a wider range of criminal behavior--from innocent persons and very trivial offenders to serious, violent recidivists--than a population of incarcerated persons, we would expect that identification of the worst recidivists among arrestees would be an easier task.

A study such as the present one could not be undertaken in the District of Columbia immediately after PROMIS was installed. Sufficient time had to elapse to permit the tracking of the criminal behavior of a group of defendants over a period of time. A predictive study of recidivism must look at non-recidivists, as well as recidivists, in order to identify those characteristics that help us distinguish between the two groups.⁸ Only with the passage of time can we tell who among a group of defendants has recidivated and who has not.

The focus on arrested persons in this study is relevant to the career criminal programs that have been established in

⁸An analogy may help to illustrate this point. The case has frequently been made that marihuana use leads to heroin use because the heroin users being analyzed previously used marihuana. To infer correctly whether marihuana use leads to heroin use, one must compare the proportion of people not using marihuana who later use heroin with the proportion of marihuana users who go on to use heroin.

many jurisdictions. Often, the rationale for concentrating prosecutory resources on cases involving a "career criminal" is that convicting and incarcerating these persons will prevent future crime. This position rests on a number of controversial assumptions.

One assumption is that certain individuals are responsible for a large share of the crime that is committed. By incapacitating these persons, presumably, future crime could be reduced. But this involves a number of difficulties. As discussed by Blumstein in the National Academy of Sciences task force on deterrence and incapacitation:

If those persons whose individual crime rates are higher than the group average could be identified and selectively imprisoned, the incapacitative effect would be increased. Such a selective incapacitation policy, however, introduces both the technical problem of predicting individuals' future crime rates and the ethical and legal problems of explicitly imprisoning people to avoid crimes they may commit in the future.⁹

As brought out by Blumstein, the second controversial assumption is that persons likely to commit serious crimes in the future can be identified. If the persons identified are not likely to commit serious crimes in the future, no matter what their past behavior might be, the program will have no impact on crime rates. Even if these two assumptions are met, ethical considerations remain.

⁹Alfred Blumstein, Jacqueline Cohen, and Daniel Nagin, *Deterrence and Incapacitation: Estimating the Effects of Criminal Sanctions on Crime Rates* (Washington, D.C.: National Academy of Sciences, 1978).

Incarcerating repeat offenders because of their expected propensity to commit more crimes in the future involves more of an ethical problem than trying to convict the same individuals for an offense for which they have been arrested, which is the purpose of the career criminal programs. Since career criminal programs do not dismantle the legal safeguards for defendants in criminal cases, concentrating more prosecutory resources on career criminals will presumably not lead to the conviction of innocent persons.

Several analysts in recent years have tried to estimate the effect incarcerating recidivists would have on the crime rate. The results have been mixed, however. In separate studies, Van Dine and Clarke concluded that trying to incapacitate adults and juveniles would have only a small impact on the crime rate.¹⁰ Conversely, Blumstein and Larson concluded that a one-third reduction in rearrest probabilities would reduce total arrests for a cohort of defendants by a factor of about two.¹¹ Some

¹⁰Stephen Van Dine, Simon Dinitz, and John Conrad, "The Incapacitation of the Dangerous Offender," Journal of Research in Crime and Delinquency, vol. 14, no. 1 (January 1977), pp. 22-34. Stevens H. Clarke, "Getting 'Em Out of Circulation: Does Incarceration of Juvenile Offenders Reduce Crime?" Journal of Criminal Law and Criminology, vol. 65 (December 1974), pp. 528-35.

¹¹Alfred Blumstein and Richard Larson, "Models of a Total Criminal Justice System," Operations Research, vol. 17, no. 2 (March 1969), pp. 199-232.

of the differences in the possible effects of incapacitation result from different estimates of the crime rates of individual offenders.¹²

Statistics on the proportion of arrests accounted for by recidivists are presented below for the District of Columbia. The data cannot by themselves tell us how frequently recidivists commit crimes for which they are not arrested, but they can tell us the portion of the work load of the prosecutor and the courts that is accounted for by recidivists.

B. RECIDIVISM IN THE DISTRICT OF COLUMBIA

Data on adult arrests in the District of Columbia indicate that a small proportion of defendants account for a large proportion of the arrests.

Since 1971, data on adult arrests brought to the Superior Court¹³ for the District of Columbia have been collected and stored in PROMIS. In early September 1975, a data file was created of all arrests brought to that office between January 1, 1971, and August 31, 1975--a total of 72,510 criminal arrests. This data file was used to determine the frequency

¹²Jacqueline Cohen, "The Incapacitative Effect of Imprisonment: a Critical Review of the Literature," pp. 187-243, in Blumstein, Cohen, and Nagin, Deterrence and Incapacitation.

¹³Until 1972 this was the Court of General Sessions.

with which individuals were rearrested, "reprosecuted,"¹⁴ and reconvicted during the 56-month period.¹⁵

The majority of arrests involved defendants who were arrested at least twice during the period of study. Thirty percent of the defendants were arrested two or more times, and they accounted for 56 percent of the arrests (Exhibit 1). Almost one-quarter of the arrests involved only 7 percent of the defendants. This confirms for adult offenders what Wolfgang, Figlio, and Sellin found to be true for juvenile offenders: a small proportion of defendants account for a large proportion of the arrests.¹⁶

The statistics for cases accepted for prosecution are very similar to those for arrests. In the period of study, a total of 58,116 cases were accepted, but only 37,840

¹⁴"Reprosecuted" means that at least two of a defendant's arrests were accepted for prosecution by the prosecutor. An arrest brought by the police is "papered" in the District of Columbia if the prosecutor decides to file charges with the court after an initial screening of the case. A case is defined as all charges brought against one defendant on a particular day.

¹⁵All of the statistics about recidivism are derived from fingerprint-based identifications made at the time of arrest. In the District of Columbia, the Metropolitan Police Department fingerprints each person who is arrested and assigns to that person a unique identification number that is used to identify that person on the occasion of each subsequent arrest.

¹⁶Marvin E. Wolfgang, Robert M. Figlio, and Thorsten Sellin, Delinquency in a Birth Cohort (Chicago: University of Chicago Press, 1972).

Exhibit 1. Proportion of Total Arrests in a 56-Month Period
 Accounted for by Defendants with Two or More Arrests
 (Washington, D.C.)

Number of Arrests from January 1, 1971, to August 31, 1975	Percentage of Defendants Having that Number of Arrests	Percentage of Total Arrests Accounted for by Defendants Having that Number of Arrests
At Least 1 Arrest	100% (45,575)	100% (72,610)
At Least 2 Arrests	30%	56%
At Least 3 Arrests	14%	36%
At Least 4 Arrests	7%	24%
At Least 5 Arrests	4%	16%

Source: Prosecutor's Management Information System (PROMIS)

defendants were involved (Exhibit 2). Twenty-eight percent of the defendants had two or more accepted cases, and they accounted for 53 percent of all accepted cases.

Using convictions as a measure of recidivism also yields similar results, but they are somewhat less pronounced. Thirty-five percent of all the convictions in the period involved defendants convicted two or more times during the same period (Exhibit 3).

These statistics understate the problem of recidivism among the population studied, for several reasons. First, as already noted, the statistics are based only on those criminal acts that resulted in arrest. Second, the statistics do not take into account any arrests the defendant might have had during the period in other jurisdictions (such as the U.S. District Court, which handles federal cases, or the courts in the neighboring Maryland and Virginia suburbs). Third, defendants sentenced to a period of incarceration for the first conviction would obviously have less "opportunity time" in which to recidivate. Fourth, juvenile offenses are not included. We will see in the next chapter that many of the adult defendants are young, which means they could have had arrests handled in juvenile court until well into the period of study --arrests that would not be reflected in the PROMIS data.¹⁷

¹⁷ A possible understatement in the conviction statistics also arises from a peculiarity in the jurisdiction under study. During the period of analysis, some of the serious (con't.)

Exhibit 2. Proportion of Total Accepted Cases in a 56-Month Period
 Accounted for by Defendants with Two or More Accepted Cases
 (Washington, D.C.)

Number of Accepted Cases from January 1, 1971 to August 31, 1975	Percentage of Defendants Having that Number of Accepted Cases	Percentage of Total Accepted Cases Accounted for by Defendants Having that Number of Accepted Cases
At Least 1 Accepted Case	100% (37,840)	100% (58,116)
At Least 2 Accepted Cases	28%	53%
At Least 3 Accepted Cases	12%	32%
At Least 4 Accepted Cases	6%	20%
At Least 5 Accepted Cases	3%	13%

Source: Prosecutor's Management Information System (PROMIS)

Exhibit 3. Proportion of Total Convictions in a 56-Month Period
 Accounted for by Defendants with Two or More Convictions
 (Washington, D.C.)

Number of Convictions from January 1, 1971 to August 31, 1975	Percentage of Defendants Having that Number of Convictions	Percentage of Total Convictions Accounted for by Defendants Having that Number of Convictions
At Least 1 Conviction	100% (14,782)	100% (18,650)
At Least 2 Convictions	18%	35%
At Least 3 Convictions	5%	15%
At Least 4 Convictions	2%	6%
At Least 5 Convictions	1%	3%

Source: Prosecutor's Management Information System (PROMIS)

Despite possible understatement, it seems clear that a disproportionate share of the work load of the Superior Court Division is attributable to persons who are arrested, prosecuted, and convicted repeatedly.

The remaining chapters look in detail at the characteristics of a sample group of these persons. Analyzing the entire file of 45,575 defendants in the file would have required resources beyond those available for the study. Moreover, not everyone in the file would have had an equal amount of time in which to recidivate. Specifically, persons first arrested on June 30, 1975, would have had only two months in which to be rearrested, while those first arrested on August 30, 1971, would have had four years. To overcome these problems, a sample panel of defendants was chosen for in-depth study and a period of time was selected that would allow everyone an approximately equal time in which to recidivate.

felonies were accepted for prosecution in the District of Columbia Superior Court but actually prosecuted in the U.S. District Court for the District of Columbia. This phenomenon occurred as the result of the phased transfer of jurisdiction for common law felonies from the U.S. District Court to the newly created District of Columbia Superior Court. The transfer was not completed until July 1972.

III. THE DEFENDANTS

This chapter identifies the personal and criminal characteristics of the population under study in the District of Columbia. This information will also enable researchers and policy makers to assess the extent to which the factors that predict the likelihood of recidivism in the District of Columbia would have predictive value in other jurisdictions.

A. SELECTION OF THE PANEL

From the file of 45,575 defendants who had at least one arrest during the period from January 1, 1971, to August 31, 1975, a smaller group of defendants was chosen to be studied in detail. The design of the study provided for the selection of a panel of defendants who could be tracked both backward and forward in time. Three criteria were used in the study design. First, enough time had to have elapsed after an initial arrest to allow time for a defendant to recidivate before August 31, 1975. Second, and at cross-purposes to the first criterion, enough time had to be allowed between January 1, 1971, and the initial arrest to develop measures of prior arrests and convictions to confirm and supplement the arrest history data collected at case screening. Third, it was desirable that the data for the period selected be as accurate as possible. Certain key data elements were not sufficiently accurate during the initial implementation of PROMIS, so a later period was chosen.

Based on these criteria, the panel selected included all defendants who had at least one arrest in a four-month period from November 1, 1972, to February 28, 1973. This allowed a history of criminal arrests and dispositions to be established for these defendants for the period from January 1, 1971, to the time of the defendant's first case in the four-month panel period. (This first case will hereinafter be referred to as the "panel" case.) After the panel case, each defendant was tracked in terms of his subsequent recidivism through August 31, 1975.

The panel file comprised 4,703 defendants with at least one arrest during the panel period. These defendants accounted for 11,052 arrests from January 1, 1971, to August 31, 1975. Information as to the type of arrest, final disposition, and several other characteristics was available for all but 41 of the 11,052 arrests, yielding data for analysis on 11,011 arrests.¹ Data were included in the file for up to 20 arrests subsequent to the panel case and up to 5 arrests prior to the panel case.

B. PERSONAL CHARACTERISTICS

The defendants in the panel were frequently young, black males who were residents of the D.C. area. At the time of their panel case, as many were unemployed as were employed. A

¹A few defendants had a very large number of arrests. Including all of the information for each of these arrests would have required a very large file that would be costly to analyze. As a result, 41 cases were eliminated from the analysis file.

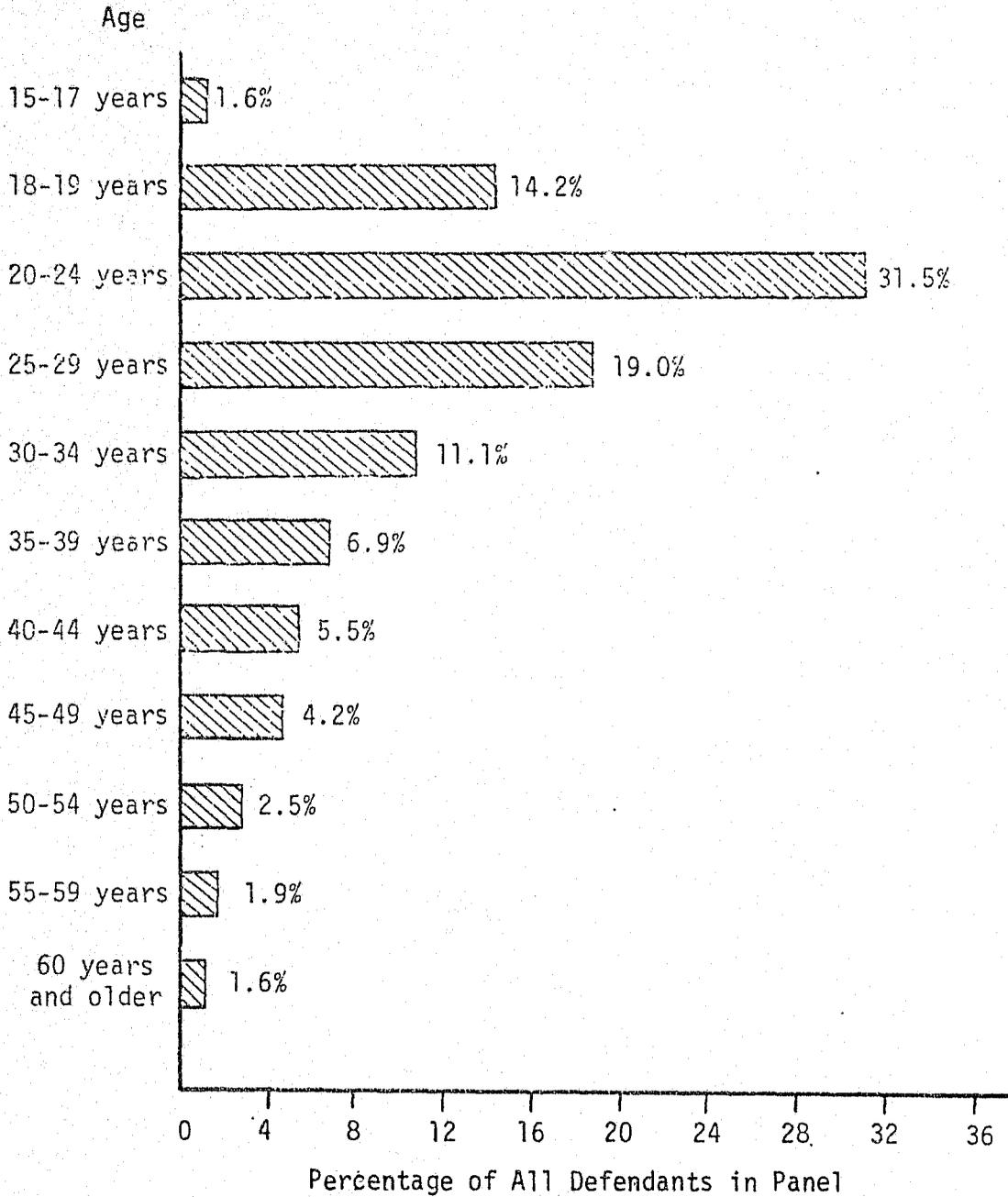
small proportion of the defendants were identified as using opiates, and another small proportion appeared to abuse alcohol.

As would be expected in a city in which over 70 percent of the residents are black, black defendants greatly outnumbered white defendants. Race-sex defendant groups ranked in order of size are: black males, black females, white males, and white females. Almost three-fourths of all the defendants were black males.

The age of defendants in the panel was usually quite young, as shown in Exhibit 4. Two-thirds of the defendants were under age 30. A small proportion--1.6 percent--were juveniles between 15 and 17 years old. These were defendants charged with serious crimes (for example, murder, rape, robbery) who were brought to the office that prosecutes adult offenses rather than to the D.C. Corporation Counsel, which generally has jurisdiction in juvenile matters.

Using an item on the PROMIS worksheet filled out by the police at screening, a large proportion of the defendants--63 percent--were identified as residents of the D.C. area at the time of their panel case. Those so identified were most often long-term residents of the District. Because resident status was not known for a large number of defendants, we examined the PROMIS data on all the arrests a defendant had over a 56-month period. The percentage of defendants for whom D.C. residency was indicated at any time was 78 percent,

Exhibit 4. Age of Panel Defendants at Time of Panel Case
(Washington, D.C.)



N=4,641 (unknowns excluded)

Source: Prosecutor's Management Information System (PROMIS)

which is probably a more accurate estimate of the proportion of residents in the panel group.

Information on the defendants' employment status was also available at the time of the panel case and for subsequent arrests. For 80 percent of the defendants, employment status was known when the panel case was initially screened. Of these, one-half were employed. A separate item in PROMIS further asks how long the individual held his last job. For those who were employed, 52 percent had held their last job for over six months. For those who were known not to be employed at the time of the panel case, 10 percent were listed as never employed, 25 percent as having held the last job for less than six months, and 17 percent as having held the last job more than six months. For the other 48 percent, it was not known how long they had held their last job.

Alcoholism and drug abuse are sometimes said to contribute to crime. The percentage of cases in which these items were indicated was relatively low for the panel case--3 percent for alcohol abuse and 8 percent for opiate use. These results are probably understated because the arresting officer would check these items on the PROMIS data sheet only if there was some reason to believe that the defendant engaged in these activities. Defendants who were obviously intoxicated or under the influence of drugs at the time of the arrest would be noticed, but others would not, even though they frequently

used drugs or alcohol at other times. If we consider all of the panel defendants' cases during the five-year period, opiate use was indicated in at least one case for 19 percent of the defendants and alcohol abuse was indicated for another 7 percent.

C. CRIMINAL HISTORY AT THE TIME OF THE PANEL CASE

A number of items in the PROMIS data reflect a defendant's criminal history as recorded by the police at the time an arrest is brought to the prosecutor for screening. Additional information about the panel defendants was obtained from PROMIS data available on arrests and final dispositions in the District of Columbia for the two years prior to the panel arrest period.

Exhibit 5 shows five criminal history variables for the panel defendants. More of the defendants had arrest records at the time of the panel case than did not. Fifty-five percent were repeat offenders, based on arrest records. Thirty percent had a previous arrest for a crime of violence.²

During the 22 months immediately preceding the panel-arrest period, 29 percent of the panel defendants had at least one arrest, 25 percent had a case accepted for prosecution at screening, and 11 percent had a conviction in the District of Columbia.

² Readers interested in how these percentages varied by type of arrest in the panel case should consult Appendix Table C-1.

Exhibit 5. Criminal Records of Panel Defendants
Prior to Panel Case
(Washington, D.C.)

Criminal History Prior to Panel Case	Percentage of Defendants in Panel Having Characteristic
Any Previous Arrest	55%
A Previous Arrest for a Violent Crime	30%
An Arrest in 1971 or 1972	29%
An Accepted Case in 1971 or 1972	25%
A Conviction in 1971 or 1972	11%
All Defendants in Panel	100% (4703)

Source: Prosecutor's Management Information System (PROMIS)

This suggests that at least some of the defendants probably had a case still pending at the time of their arrest for the panel case. By looking to see if defendants in the panel had any other cases without final dispositions at the time of their panel arrest, we determined that 17 percent of the defendants had at least one other case pending. Four percent of the defendants had two or more cases still pending. PROMIS also records whether a defendant is on probation or parole at the time a new case against him is screened. These data revealed that 8.5 percent of the defendants were on probation or parole at the time of the panel case.

Two other characteristics that were part of the original defendant score in PROMIS will also be tested to see if they predict recidivism: whether the defendant used an alias and whether his first arrest was for auto theft. At the time of their panel case, 4 percent of the defendants were identified as using an alias, and 2 percent had auto theft as their first arrest.

D. TYPES OF CRIME FOR WHICH DEFENDANTS WERE ARRESTED

Exhibit 6 shows the types of felonies and serious misdemeanors for which defendants were arrested in their panel case. These classification groups will be used throughout this report. The crimes divide almost evenly into violent, property, and victimless crimes; the specific breakdowns within each group are shown on the table. The largest single

Exhibit 6. Types of Crimes for Which Defendants
Were Arrested in Panel Cases
(Washington, D.C.)

Type of Crime	Number of Panel Cases
Violent:	
Homicide	91
Assault	918
Sexual Assault	136
Robbery	498
Property:	
Burglary or Unlawful Entry	421
Larceny	849
Fraud	157
Arson or Property Destruction	79
Victimless:	
Weapons Offense - Gun	331
Weapons Offense - Other	73
Gambling	144
Consensual Sex	164
Drugs	647
Bail Violations	137
Other	58
All Defendants in Panel	4,703

Source: Prosecutor's Management Information System (PROMIS)

categories, in order, were assault, larceny, drugs, robbery, and burglary or unlawful entry. "Weapons offenses" is used to refer to cases in which possession of the weapon was the most serious offense charged. The consensual sex category is composed primarily of prostitution cases. The drug cases included in these data usually involve only possession rather than selling. Many of the arrests were for offenses involving marihuana.

The crime groups were formed by classifying the cases according to the statutory maximum sentence assigned to the most serious charge cited by either the police or prosecutor. Using the maximum charge, logical categories of crime were formed from an original list of approximately 200 possible charge types.

The defendant characteristics described in this chapter were tested in the analysis described in Chapter IV to see which were the best predictors of recidivism.

IV. VARIABLES ASSOCIATED WITH FUTURE RECIDIVISM

Thirty-nine percent of the 4,703 defendants in the panel group had another arrest in the District of Columbia between the time of their panel case (in late 1972 or early 1973) and August 31, 1975. The central issue to be examined here is how to distinguish the worst of these recidivists from the other defendants, based on what was known about the defendants at the time their panel case was brought to the prosecutor.

A. MEASURES OF RECIDIVISM

The general purpose of trying to identify recidivists is to prevent future crime through selective incapacitation. However, it is not clear who the target group should be. Deciding who the worst recidivists are requires that we define our crime reduction objectives. Do we want to emphasize the prevention of certain very serious crimes, or do we want to emphasize a decrease in the total volume of crime? If we consider the seriousness of the event to be more important, we can try to predict which defendants are most likely to commit any one of a number of very serious crimes within a given time period. On the other hand, we may want to target on the persons who are arrested most often. For this analysis, we have decided to include both seriousness and frequency in our measure of recidivism. Three questions had to be resolved in order to form our recidivism scale: What criminal justice event is to be considered recidivistic--a rearrest, a re prosecution, or a reconviction? How

can the seriousness of the offense that gave rise to the event be taken into account? How can the frequency of the event be taken into account?

Deciding how far into the criminal justice system a defendant must move before being considered a recidivist is important. As Blumstein and Larson point out, if arrests are used, someone may be included as a recidivist who did not actually commit another crime; whereas if convictions are used, many persons who did commit crimes will not be included because their cases are disposed short of conviction.¹ Since most of the predictive studies of recidivism have been based on parole data, reincarceration has been the measure most often used. Rather than use only one definition in this analysis, we examine recidivism separately in terms of rearrests, reprosecutions, and reconvictions.

Many researchers have dealt theoretically, and some empirically, with the problem of the seriousness of the recidivistic act. If a defendant moves from committing armed robberies to an occasional misdemeanor, this could be seen as an improvement in his behavior. Glaser makes this point in the following statement:

Recidivism [usually] is measured in terms of one rearrest, reconviction or reimprisonment, although those thus classified as recidivists

1

Alfred Blumstein and Richard C. Larson, "Problems in Modeling and Measuring Recidivism," Journal of Research in Crime and Delinquency, vol. 8, no. 2 (July 1971), pp. 124-25.

differ tremendously in the immediacy, extent and seriousness of their renewed criminal behavior.²

Those who have tried to predict violent behavior empirically have generally not been very successful.³ In this analysis, we weight each offense by seriousness, but do not try to predict violent behavior per se. Two measures of seriousness are used--the Sellin-Wolfgang index and the maximum sentence that could be imposed for the most serious charge initially brought by the police. For each offense, PROMIS computes the Sellin-Wolfgang index, which is a measure of crime seriousness based on characteristics of the event--such as the number of persons injured, the number hospitalized, and the amount of property taken. The developers of the index asked citizens and criminal justice practitioners to rate the seriousness of crimes, then they isolated the elements of the crime that were associated with higher ratings.⁴ Each recidivistic act in this analysis

2

Daniel Glaser, Routinizing Evaluation: Getting Feedback on Effectiveness of Crime and Delinquency Programs, Monograph, National Institute of Mental Health (Washington, D.C.: Government Printing Office, 1973) p. 22.

3

Ernst A. Wenk, James O. Robison, and Gerald W. Smith, "Can Violence Be Predicted?" Crime and Delinquency, vol. 18, no. 4 (October 1972), pp. 393-402; John Monahan, "The Prediction of Violent Criminal Behavior: A Methodological Critique and Prospects," pp. 244-69 in Alfred Blumstein, Jacqueline Cohen, and Daniel Nagin, eds., Deterrence and Incapacitation: Estimating The Effects of Criminal Sanctions on Crime Rates (Washington, D.C., National Academy of Sciences, 1978).

4

For details on the development of the index, see Thorsten Sellin and Marvin Wolfgang, The Measurement of Delinquency (New York: Wiley, 1964).

was weighted separately using these two measures. Not surprisingly, the results of applying the two measures were generally similar. The results will be presented separately only for those instances in which they differ.

Measuring the frequency of recidivistic events involves another complication. The amount of opportunity time that each defendant has to recidivate should be taken into account, since a person cannot be rearrested while in prison.⁵ This necessitates having information on whether defendants were incarcerated prior to trial or after conviction during the period of study. Two separate manual data-collection efforts were initiated to obtain this information. (For details of this procedure, see Appendix A.)

Instead of selecting one preferred definition of the recidivistic event and one preferred index of seriousness, several measures of recidivism were developed. Each reflects the seriousness of a defendant's contact with the criminal justice system while he was "on the street." The indices all have the following general form:

5

The need for taking opportunity time into account has been seen as important by other researchers, although their solutions to the problem have been different from that proposed in this analysis. Michael D. Maltz and Richard McCleary, "The Mathematics of Behavioral Change: Recidivism and Construct Validity," Evaluation Quarterly, vol. 1, no. 3 (August 1977), pp. 421-38. Stephen Stollmack and Carl M. Harris, "Failure-rate Analysis Applied to Recidivism Data," Operations Research, vol. 22 (November-December 1974), pp. 1192-1205. The techniques developed in these articles are for use in comparing recidivism rates for different groups, rather than for use in estimating probabilities of recidivism for individual defendants.

Recidivism Index = $\frac{\text{The Sum of the Seriousness of Each Subsequent Criminal Justice Contact}}{\text{Time on the Street,}}$

where seriousness is measured by the Sellin-Wolfgang index or maximum sentence, and criminal justice contact can be an arrest, a prosecution, or a conviction. These indices rank defendants along a continuum from those least likely to be serious, repeat offenders to those most likely to be. At the upper end of the scale would be defendants who were rearrested for many serious crimes in a short period of time. At the lower end of the scale would be defendants who were never rearrested although they had "opportunity" time on the street. (A more technical discussion is given in Appendix B.)

B. PREDICTING THE SERIOUSNESS AND FREQUENCY OF RECIDIVISTIC EVENTS

Exhibits 7 through 12 depict the results of the multivariate analysis of recidivism, using our three definitions of recidivism: rearrest, reprosecution, and reconviction. In general, the results are quite similar. For this reason, Exhibit 7, which gives the results of the analysis of recidivism measured in terms of rearrests, will be discussed in the greatest detail. Exhibits 8-12 will be discussed only in regard to the unique findings they present. Readers interested in the precise regression results should consult Appendix Exhibits B-1 through B-8.

As noted before, the analysis makes use of only the information routinely collected by the prosecutor at the time a case

is presented to him by the police for initial screening. (A full list of the independent variables considered is given in Appendix B.) The variables shown in the exhibits are the result of a long process of testing many different variables and selecting those with the most predictive value. The exclusion of a particular variable does not mean that it was not associated with future recidivism, however. In many instances, two variables were substitutes for each other (for example, whether the defendant has an arrest record and whether the defendant was arrested in the past five years); in those instances, whichever variable had the greater predictive power was included in the final results.⁶ In other instances, two variables that were highly correlated with each other were both important predictors, so both were included in the final results.

1. The Arrest Recidivism Index

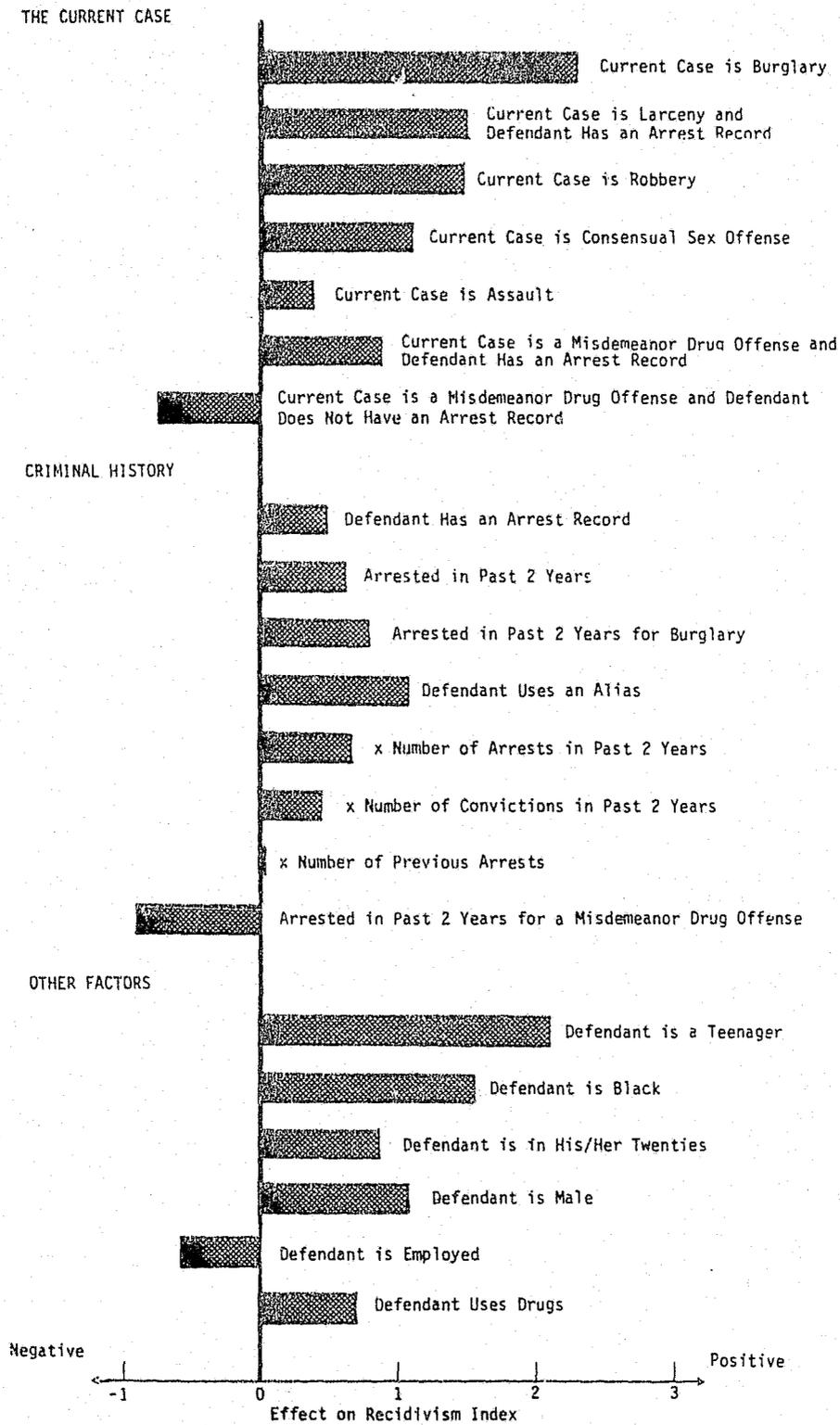
The results shown in Exhibit 7 are grouped into three parts: variables related to the current case, criminal history variables, and other defendant characteristics. The dependent variable in this analysis was weighted for seriousness by using maximum sentence.

Many types of arrests were found to be associated with future recidivism. Whether the current arrest was for a burglary was found to have the strongest effect of any variable in this analysis. The next strongest effect for type of crime

⁶ Predictive power was measured by R^2 , or the amount of variance in the dependent variable that could be explained. In addition, each variable had to have a t-statistic of at least 1.96 in absolute value, which is the .05 significance level, to be included in the final results.

Exhibit 7. Factors Predicting the Seriousness and Frequency of Future Rearrests, Using Maximum Sentence As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients reported in Appendix Exhibit B-1)



Source: Prosecutor's Management Information System (PROMIS)

was whether the current arrest was for a robbery. Burglary and robbery were important predictors no matter what definition of recidivism was used. They appear in all the analyses (except for the analysis of misdemeanor panel cases, which, by definition, exclude any robbery charges).

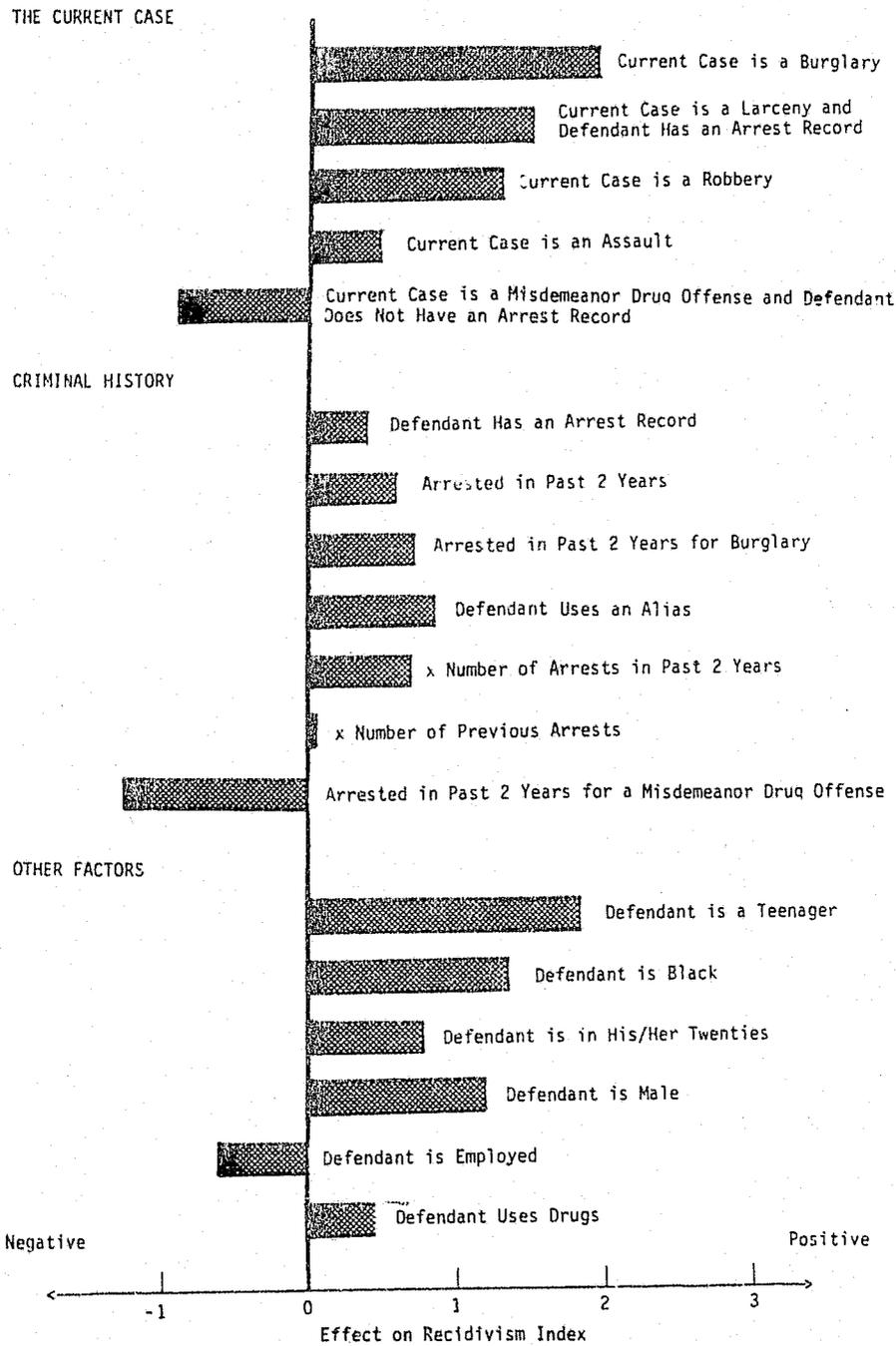
Of lesser importance, but still positively associated with recidivism, were whether the current arrest was for a consensual sex offense (mainly prostitution) and whether it was for assault. One might be surprised to find that consensual sex arrestees would go on to be rearrested for serious crimes. In fact, this is not what generally happens. Prostitutes are rearrested so many times that this eventually adds up--in the analysis--to the equivalent of one serious offense. Since the maximum sentence for prostitution is 90 days, four rearrests for prostitution have the same total weight as one rearrest for simple assault, which carries a maximum penalty of one year. Exhibit 8 illustrates this point. In the exhibit, the rearrests are weighted by the Sellin-Wolfgang index, which gives a weight of "0" to prostitution. Comparing the two exhibits, one can see that they are almost equivalent. One of the few differences is that whether the panel case was a consensual sex offense does not appear as a predictor in Exhibit 8. From this point on, only results using maximum sentence will be presented in the text.

7

Results for both weighting schemes are presented in Appendix B whenever consensual sex offenses turned out to be important, using maximum sentence.

Exhibit 8. Factors Predicting the Seriousness and Frequency of Future Rearrests, Using the Sellin-Wolfgang Index As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients presented in Appendix Exhibit B-2)



Source: Prosecutor's Management Information System (PROMIS)

Two other types of panel crimes were important predictors of recidivism, but only when the defendant's arrest record was taken into account: larceny and misdemeanor drug arrestees were likely future repeaters only if they had an arrest record at the time of their panel case. Many of the larceny cases involved shoplifting offenses; first offender shoplifters may be deterred from future crime just by being apprehended. Many of the drug defendants were arrested in 1972 and 1973 for marihuana possession, which constituted their total known criminal careers. It is easier to see the extent to which arrest record made a difference for these two offenses by looking below at the rearrest rates for defendants with and without arrest records at the time of their panel cases. (The proportion rearrested for all defendants was 39 percent.)

Percentage Rearrested
Before August 31, 1975

<u>At time of Panel Case:</u>	<u>Panel Case Was a Larceny</u>	<u>Panel Case Was a Mis- demeanor Drug Offense</u>
Had an arrest record	60% (420)	56% (267)
Did not have an arrest record	24% (429)	19% (380)

Many variables describing a defendant's criminal history were found to be good predictors of his post-arrest behavior. The number of prior arrests and convictions a defendant had was highly significant. Whether the defendant was identified as

8

Readers interested in these proportions for all types of crime should consult Appendix Exhibit B-2.

having an alias was also a good predictor. Arrests for two types of offenses in the past two years were also important-- burglary and drug offenses. An arrest in the past two years for burglary increased the chances of recidivism, while one for a misdemeanor drug offense decreased the chances. Defendants with drug arrests in the past two years were more frequently rearrested than other defendants, but it appears that it was other aspects of their arrest history that led to this result. When other factors are included in the multivariate analysis, the effect from the drug arrest becomes negative.

Of the third group of defendant characteristics that emerged as significant predictors of recidivism, only two seem to have potential use for policy purposes--employment status and drug use. If a defendant was employed, he was less likely to be rearrested.⁹ Drug use, on the other hand (irrespective of the current charge), was a positive predictor of recidivism. This variable was measured in terms of whether the police identified the defendant as a drug user, regardless of whether the current arrest was for a drug offense. The types of drug users identified here are presumably heroin users, for the most part, since the datum we are relying upon asks about opiate use. The latter seems to increase the likelihood of future arrests.

9

Both employment and unemployment were included in the analysis, because employment status was not known in 20 percent of the cases. Employment was a better negative predictor of rearrest, than unemployment was a positive predictor. In a subsequent analysis, the opposite was true (see Exhibit 11).

The findings about persons arrested for a misdemeanor drug offense, on the other hand, concern mainly marihuana arrestees, who are less likely to be rearrested (unless they have an arrest record at the time of the drug offense).

In the third group of characteristics, the defendant's age, race, and sex were included as control variables. It is possible that if other variables, such as income, education, or family background, had been included, the age, race, and sex variables would not have been as important as reflected in Exhibit 8. Whether the defendant was a teenager had the strongest predictive effect of these three variables. (This variable includes 18 and 19-year olds and a few 15-17 year olds prosecuted as adults.) This is consistent with the fact that young defendants account for a large proportion of arrests. The effect on the rearrest recidivism index of whether the defendant was in his or her twenties was less than half as large as that for teenagers. Whether the defendant was black was also a strong predictor. This may be due to the omission of other variables mentioned above. Another possibility is that this could be a result of greater exposure to situations in which arrests are likely to occur. Whether the defendant was male was also predictive of recidivism.

2. The Prosecution Recidivism Index

The second definition of recidivism, reprosecution, means that the prosecutor filed the initial case brought by the police during the four-month "panel" period and then filed at least one

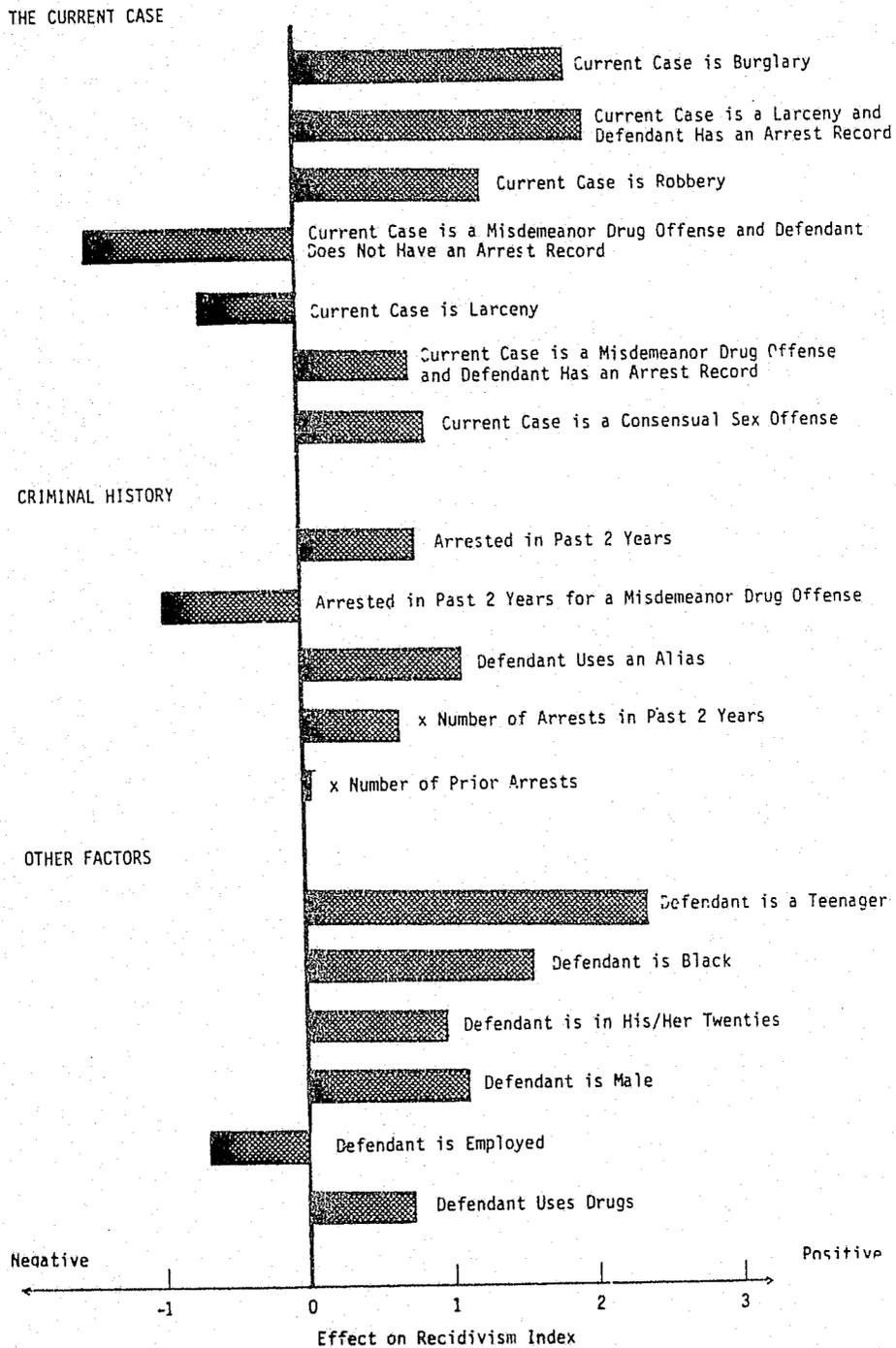
other case against the same defendant by August 31, 1975. Included in the analysis of reprosecution were the 3,543 defendants whose panel case was filed by the prosecutor. Subsequent arrests were included in this recidivism index only if such cases were prosecuted. We can see from Exhibit 9 that the final results of this analysis are quite similar to the results for rearrest. A few variables that were significant for rearrest were not significant for reprosecution, but all those that remain have approximately the same effect on recidivism as they did in the rearrest analysis, with one exception. If the current case was a larceny, reprosecution was less likely unless the defendant also had an arrest record, in which case reprosecution was much more likely. Because consensual sex offenses also were important in this analysis, a separate regression analysis was computed using the Sellin-Wolfgang index. These results, shown in Appendix Exhibit B-4, indicate that consensual sex offenses are important predictors of subsequent prosecutions for prostitution but not other subsequent offenses.

3. The Conviction Recidivism Index

The analysis of reconviction was based on the 1,366 defendants who were convicted in their panel case. Fewer variables were significant in this analysis than in the previous two. Many of these defendants were incarcerated for their panel offense, so that a longer time period may be needed to ascertain their recidivistic behavior. However, the variables

Exhibit 9. Factors Influencing the Seriousness and Frequency of Re prosecution, Using Maximum Sentence As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients reported in Appendix Exhibit B-3)



Source: Prosecutor's Management Information System (PROMIS)

that were found to be significant predictors were also significant in the other analyses, again with one exception.

A variable found to be important in predicting reconviction was whether the victim and defendant knew each other in some capacity before the offense (see Exhibit 10). If a prior relationship did exist, the likelihood of future serious convictions was reduced. Many studies, including Numbers 4 and 12 of the PROMIS Research series, have documented the fact that cases involving persons who know each other result in conviction less frequently than other cases--in many instances because the prosecutor must drop the case due to the reluctance of the complaining witness to cooperate. There are several possibilities here. It may be that persons convicted of victimizing someone they know are less likely to recidivate in the future. Another possibility is that such persons are not convicted a second time.

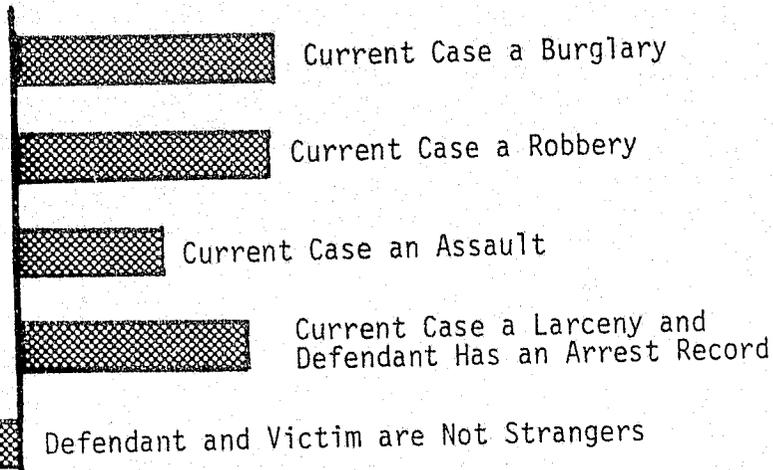
C. THE DISTINCTION BETWEEN FELONIES AND MISDEMEANORS

In the previous section, whether the current case was a felony or a misdemeanor was not found to be an important predictor of recidivism in any of the final results. However, there are differences among the types of crime that are considered felonies or misdemeanors, and different types of crime were found to be associated with the frequency and seriousness of recidivism. Separate analyses were made of defendants arrested for felonies and those arrested for misdemeanors, using the rearrest recidivism index. The two results were quite

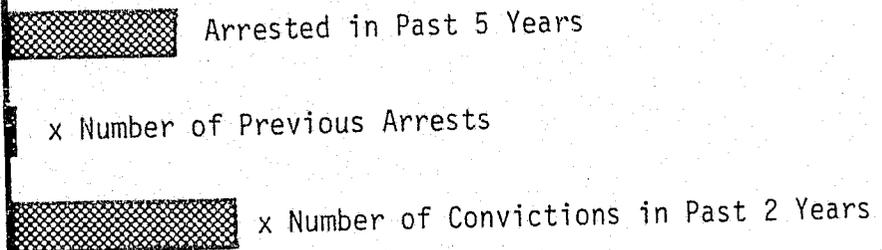
Exhibit 10. Factors Predicting the Seriousness and Frequency of Reconviction, Using Maximum Sentence As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients presented in Appendix Exhibit B-5)

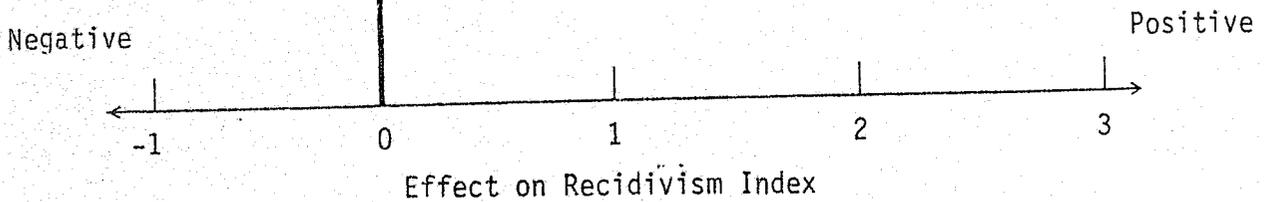
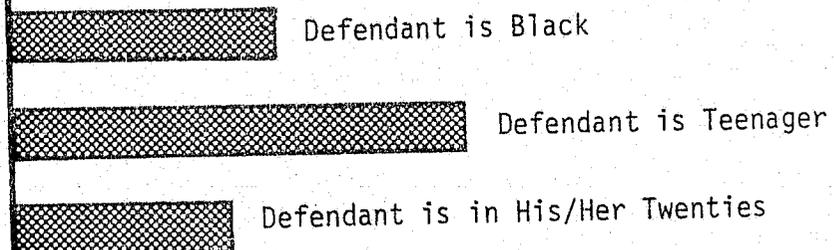
THE CURRENT CASE



CRIMINAL HISTORY



OTHER FACTORS



Source: Prosecutor's Management Information System (PROMIS)

similar, as expected, except in regard to the types of crime that predict recidivism.

Exhibit 11 shows the final results of the analysis of the 1,957 defendants whose panel case was a felony. Whether the current case involved a burglary offense turned up as a very strong predictor of recidivism. Whether the current case involved a robbery was also a strong predictor, although not as strong as burglary. The types of felonies that did not increase the recidivism index are important to note also. Homicide, aggravated assault, and sexual assault arrestees were less likely than robbery and burglary arrestees to be rearrested for serious crimes, at least in the short run. Other reasons exist for concentrating prosecutory resources on murder, aggravated assault, and rape cases, but the future recidivism of these defendants is not one of them, according to the results obtained in this analysis.

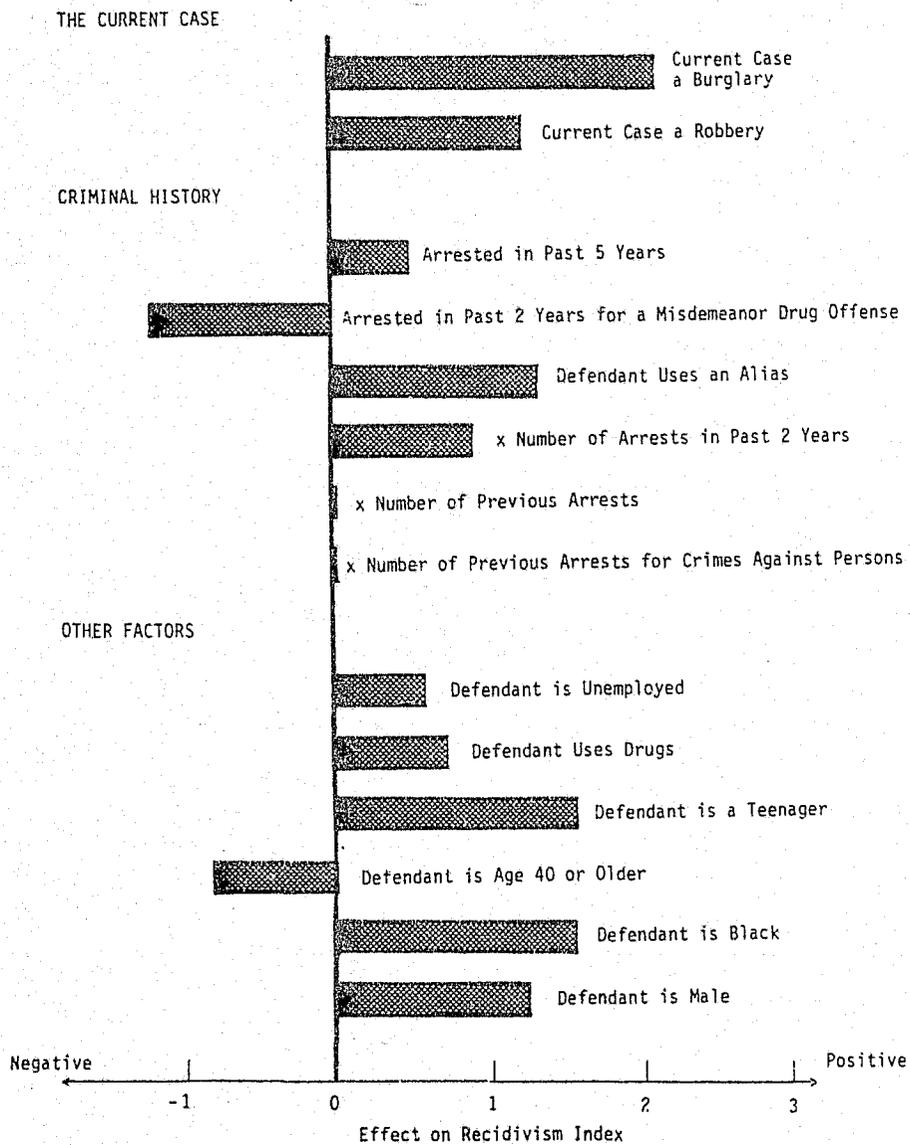
The other variables predicting recidivism for felony arrestees were the same as those found to be important in the analysis of all defendants, with the exception of two new variables: the number of prior arrests for crimes against persons (violent offenses), and whether the defendant was age 40 or older. The former increased the recidivism index,

10

It is possible that if these defendants were followed for many more years they would eventually repeat. Although the recidivism index was developed to take time on the street into account, the results may still be influenced by the fact that some serious felons had very little opportunity to be rearrested because they received long prison terms in their panel cases.

Exhibit 11. Factors Predicting the Seriousness and Frequency of Future Rearrests After a Felony Arrest, Using Maximum Sentence As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients presented in Appendix Exhibit B-6)



Source: Prosecutor's Management Information System (PROMIS)

while the latter decreased it.

For the 2,746 defendants whose panel arrest was a misdemeanor, four types of crime were important predictors of recidivism. Exhibit 12 shows that whether the current arrest was for a consensual sex offense,¹¹ attempted burglary or unlawful entry, assault, and larceny was associated with future recidivism, in that order. There was an added effect for defendants arrested for larceny who had an arrest record. There was no additional effect from an arrest record in combination with the other three crimes. Drug offenses did not turn out to be important.

Two criminal history variables that were important only for misdemeanors were whether the defendant was on probation or parole and whether the defendant was arrested in the past two years for larceny. (See the related discussion on pages VI-1, VI-2, and VI-12.)

D. THE ACCURACY WITH WHICH RECIDIVISM
CAN BE PREDICTED

In this chapter, we have been discussing variables that are good predictors of future recidivism. Our goal is to form a numerical scale, based on variables available at case screening, that will reproduce the recidivism index. If our model perfectly described of the behavior of these 4,703 defendants, then the numerical combination of each individual's characteristics would be exactly equal to that individual's recidivism

11

When the Sellin-Wolfgang index was used to weight the subsequent arrests, the effect for consensual sex offenses disappeared. This result is shown in Appendix Exhibit B-8.

while the latter decreased it.

For the 2,746 defendants whose panel arrest was a misdemeanor, four types of crime were important predictors of recidivism. Exhibit 12 shows that whether the current arrest was for a consensual sex offense,¹¹ attempted burglary or unlawful entry, assault, and larceny was associated with future recidivism, in that order. There was an added effect for defendants arrested for larceny who had an arrest record. There was no additional effect from an arrest record in combination with the other three crimes. Drug offenses did not turn out to be important.

Two criminal history variables that were important only for misdemeanors were whether the defendant was on probation or parole and whether the defendant was arrested in the past two years for larceny. (See the related discussion on pages VI-1, VI-2, and VI-12.)

D. THE ACCURACY WITH WHICH RECIDIVISM
CAN BE PREDICTED

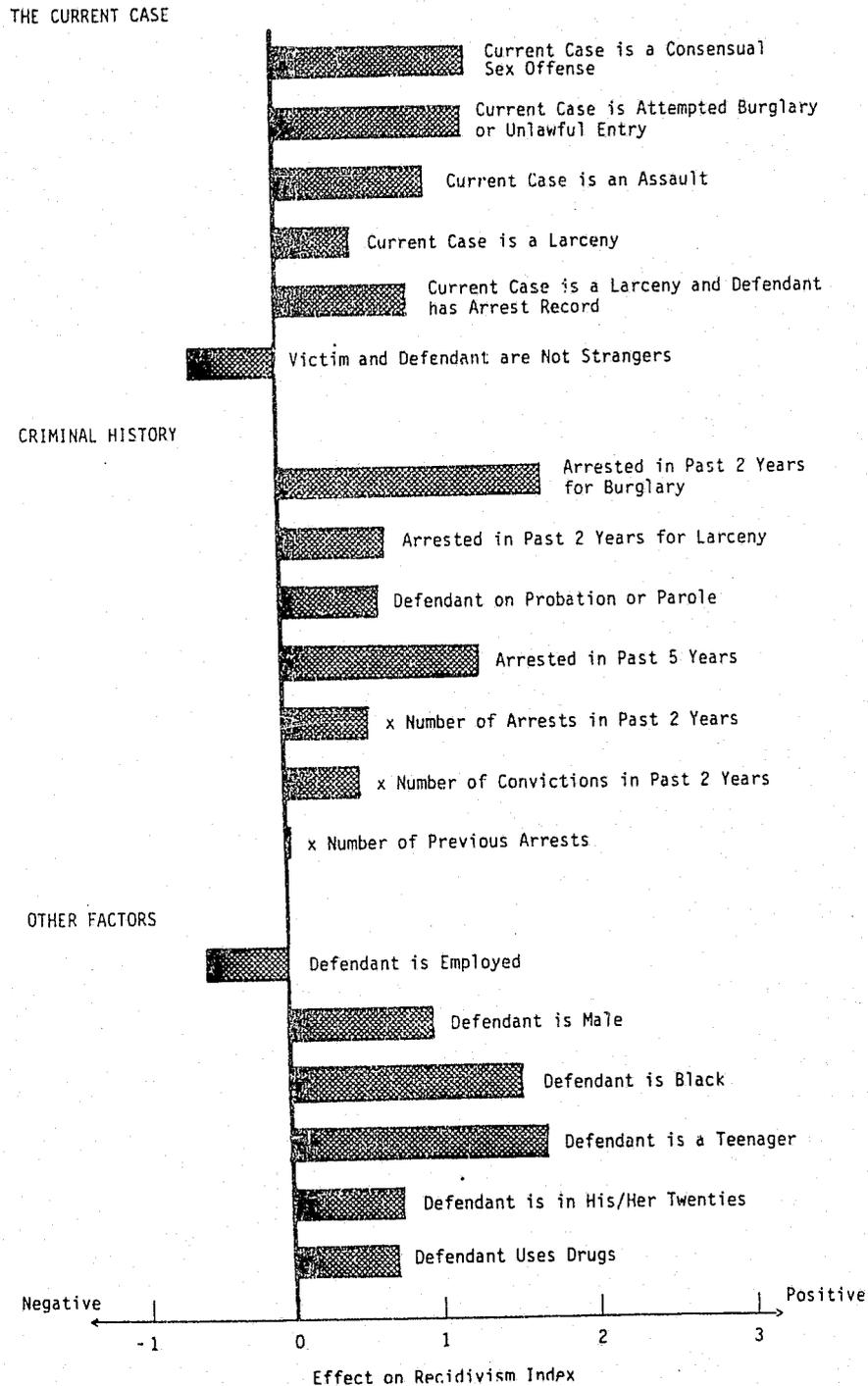
In this chapter, we have been discussing variables that are good predictors of future recidivism. Our goal is to form a numerical scale, based on variables available at case screening, that will reproduce the recidivism index. If our model perfectly described the behavior of these 4,703 defendants, then the numerical combination of each individual's characteristics would be exactly equal to that individual's recidivism

11

When the Sellin-Wolfgang index was used to weight the subsequent arrests, the effect for consensual sex offenses disappeared. This result is shown in Appendix Exhibit B-8.

Exhibit 12. Factors Predicting the Seriousness and Frequency of Future Rearrests After a Misdemeanor Arrest, Using Maximum Sentence As the Seriousness Criterion: Washington, D.C.

(Scale depicts regression coefficients presented in Appendix Exhibit B-7)



Source: Prosecutor's Management Information System (PROMIS)

index. The state of the art of predicting human behavior has not advanced to a level that permits such perfection. In this section, we will attempt to show how close we have come.¹²

How well do the weighting schemes show in Exhibits 7 through 12 discriminate between those who became the serious recidivists and the other arrestees? We can answer the question by comparing estimates of future recidivism based on the weighting scheme in Exhibit 7 with the actual behavior of the defendants.

Of the 4,703 defendants, 39 percent (1,834) were re-arrested at least once. Some of the rearrests were not for serious crimes, however. Hence, it makes sense to choose a smaller group to concentrate on. How well does the weighting scheme shown in Exhibit 7 do in selecting the "worst" (that is, most recidivistic) 10, 15, or 25 percent of those rearrested?

Let us begin by testing the accuracy of the prediction model in identifying the worst 10 percent of the defendants. What proportion of the worst 10 percent of the recidivists do we identify if we use the weights in Exhibit 7 to choose them? The answer is 29 percent. Seventy-one percent of the defendants identified by the analysis were not in the worst 10 percent in

¹²

This discussion is intended to demonstrate the effects of the R^2 we obtained, by comparing the actual "Y" to the predicted "Y." Readers interested in the R^2 obtained for each measure of recidivism analyzed should consult Appendix Exhibits B-1 to B-8. The R^2 for our rearrest analysis is remarkably similar to those obtained in the parole studies mentioned in Chapter II.

terms of actual behavior. If we choose a larger group of defendants, identified by the weights, we would obtain more of the worst 10 percent. (Taking this to its extreme, if we chose all defendants we would get 100 percent of the worst defendants.) Results are shown for choosing up to one-half of the defendants in the table below:

Proportion of Defendants Chosen	Proportion of the Actual Worst 10 percent Chosen	
Estimated to be in worst 10 percent	29%	(478)
Estimated to be in worst 15 percent	39%	(478)
Estimated to be in worst 25 percent	57%	(478)
Estimated to be in worst 33 percent	67%	(478)
Estimated to be in worst 50 percent	84%	(478)

More and more of the worst 10 percent are chosen as the criterion for selection becomes less stringent. Eight-four percent of the worst 10 percent would be identified if we singled out for special handling all defendants whose score was above the median. Even though the correspondence between the actual and predicted is not perfect, most of the more serious recidivists are at least in the upper half of the scale. However, we cannot ignore the problem that this entails. As we choose a larger group of defendants in order to identify a greater proportion of serious recidivists, we get larger and larger numbers of persons who are not serious recidivists.¹³

The same type of analysis can be made using a larger

¹³

An excellent discussion of the trade-offs in decision making of this type is found in Leslie T. Wilkins, "Directions for Corrections," pp. 522-42 in Robert M. Carter, Daniel Glaser, and Leslie T. Wilkins, eds., Correctional Institutions (Philadelphia: J.B. Lippincott, 1977).

proportion of the serious recidivists. If we set as a goal the identification of the worst 15 percent, how well can we do?

<u>Proportion of Defendants Chosen</u>	<u>Proportion of the Actual Worst 15 Percent Chosen</u>	
Estimated to be in worst 15 percent	39%	(711)
Estimated to be in worst 25 percent	56%	(711)
Estimated to be in worst 33 percent	66%	(711)
Estimated to be in worst 50 percent	84%	(711)

We do about as well in choosing the worst 15 percent as in choosing the worst 10 percent. There is a small proportion of defendants who have serious recidivistic histories but who are not identified by the variables we had available. There may be other variables that would increase our predictive power; on the other hand, the behavior of certain individuals may be unpredictable. Our results are similar to those of previous researchers and may be about as good as can be expected.

This analysis can be extended once more to the worst 25 percent of the defendants.

<u>Proportion of Defendants Chosen</u>	<u>Proportion of the Actual Worst 25 Percent Chosen</u>	
Estimated to be in worst 25 percent	48%	(1171)
Estimated to be in worst 33 percent	58%	(1171)
Estimated to be in worst 50 percent	77%	(1171)

One of the original motives for this study was to validate the old PROMIS defendant score. We can compare the new results with those obtained for the old score, the weights for which were shown in Chapter II. As would be expected, the

new results fit the behavior of the 4,703 defendants better than the weights from the old score. This can be illustrated by comparison. By choosing the defendants estimated to be in the worst 15 percent using the weighting scheme in Exhibit 7, we saw that 39 percent of the actual worst 15 percent of the recidivists were chosen. Using the old PROMIS defendant score to choose the estimated worst 15 percent yields only 27 percent.¹⁴ How well each score would do on a third sample cannot be ascertained without another analysis, however.

The new weighting scheme would seem capable of improving on decision making based on either random choices or the earlier defendant score, but it is clear that certain types of recidivists cannot be identified in this way. First offenders are a particular problem, since the score leans very heavily on past criminal behavior to predict future criminal behavior. Contributing to this difficulty is the fact that juvenile records are not used in the score. Many defendants considered "first offenders" really are not, since they were involved with the courts as juveniles. This type of problem lessens predictive power. Another factor that limits predictive power is that some persons are defined as nonrecidivists when they would be recidivists when followed for a longer period of time.

14

It was not possible to choose exactly the worst 15 percent with the old defendant score, because it produces large groups with the same recidivism-potential score. The closest to 15 percent that could be managed was 14.2 percent. This will underestimate slightly how well the score does.

An ultimate purpose of analyzing the recidivistic behavior of these 4,703 defendants is to identify criteria for use in designing programs to target on persons who are likely to be serious offenders in the future. How well the variables found to be important in this analysis do in identifying the serious offenders in other times and places has yet to be demonstrated. One issue is how well do the variables perform in another sample from the District of Columbia, and, how well do they perform in samples from other jurisdictions. It would be advisable to conduct both types of validation before the results are used for policy purposes.

V. CASE-PROCESSING DECISIONS AND RECIDIVISM

The analysis in Chapter IV did not take into account the fact that the criminal justice system can intervene to affect an individual's basic recidivism potential by handling his or her case in different ways. In this chapter, we examine the relation between future recidivism and three instances of differential case processing: the final disposition of the panel case; diversion programs for first offenders; and referral of misdemeanor offenders to a Major Violator's Unit.

A. THE EFFECT OF FINAL DISPOSITION ON RECIDIVISM

In 1967, the President's Commission on Law Enforcement and Administration of Justice pointed out the need for the type of research reported in this section:

A question to be explored is whether the rearrest probabilities and the crime-type distributions become worse for those processed further through the system. If that is the case, it may result either from differences among individuals who reach the various stages or from the treatment itself. Unfortunately, data to examine such basic questions do not now exist....¹

Since the Commission issued its report, the data needed to address the question have become available. The final disposition of the panel arrest was recorded in PROMIS for each of the 4,546 defendants whose cases were closed by the time of this analysis. Exhibit 13 shows the percentage of defendants who were rearrested after their panel arrest,

¹ Task Force Report: Science and Technology, President's Commission on Law Enforcement and Administration of Justice (Washington, D.C.: Government Printing Office, 1967), p. 64.

Exhibit 13. Percentage of Defendants Rearrested After Panel Case
 According to the Final Disposition of the Panel Case
 (Washington, D.C.)

Final Disposition of Defendant in Panel Case	Percentage of Defendants Rearrested After Panel Case	
Found Guilty at Trial	47%	(295)
Other	43%	(70)
Pled Guilty	42%	(1,118)
Dismissed by Judge or Prosecutor	39%	(1,677)
Found Not Guilty at Trial	37%	(194)
Rejected at Screening	33%	(1,159)
Grand Jury Ignoramus	27%	(33)
All Defendants in Panel Whose Cases Were Closed	39%	(4,546)

according to the final disposition of the panel arrest. The lowest proportion of rearrests was found among those defendants whose panel case had not been indicted by the grand jury ("grand jury ignoramus"), and the highest proportion was among those defendants found guilty at trial. These differences could be accounted for by the kinds of defendants who receive the different types of disposition, rather than solely by the disposition itself. To test this possibility, each of the final disposition categories was entered in the multivariate analysis to see if it had a unique relationship with recidivism after including all of the other variables found to predict recidivism (shown in Exhibit 7).

Only two final disposition categories (covering a total of 227 cases) appeared to have any significant impact on recidivism--whether the case was a grand jury ignoramus, and whether the defendant was found not guilty at trial.² In both instances, these defendants were less likely to recidivate. These are rather interesting results--in one of these two final dispositions the defendant is found to be legally innocent, and in the other the grand jury refuses to return an indictment, ostensibly because of the defendant's perceived lack of guilt. On the other hand, if a case is rejected by the prosecutor at screening,

2

Whether the case was ignored by the grand jury was significant at .06, meaning that only 6 times out of 100 would one expect to find an effect that large by chance alone. Whether the defendant was not guilty was significant at the .05 level. Another disposition close to being significant was pleas. Pleas were positively associated with recidivism. The effect was small and significant at the .08 level.

or later dismissed, it does not mean that the defendant was found innocent. A case can be dismissed because of witness or evidence problems, for example, not because it is believed that the defendant is not guilty.

We have established an association between two types of final dispositions and recidivism. The causal ordering of the two variables is not as easy to resolve. Does the final disposition of the case affect recidivism, or does recidivism potential affect the final disposition? One way of testing for the second possibility is to see whether the same variables that predict recidivism seem to predict a grand jury ignoramus or a not-guilty finding at trial. In separate analyses of the two decisions, we found that none of the variables that predict recidivism predicted either a grand jury ignoramus or a not-guilty finding at trial.³ From our analyses, it is more likely that these two dispositions affect recidivism rather than the reverse.

Given these results, what could be the process involved? There are at least two competing interpretations. One is that some unmeasured variable that predicts recidivism--for example, "innocence" of the current crime--leads to the case being ignored by the grand jury or to the defendant being found not guilty at trial, and leads to less recidivism.⁴ The other

3

The variance in each of the two decisions explained by all the recidivism-predictor variables was less than 1 percent.

4

This explanation would be consistent with the finding for pleas described in footnote 2. Defendants who plead guilty (continued)

explanation is that something about being found not guilty or having one's case ignored by the grand jury deters a person from continuing in a life of crime. The former explanation seems more plausible, but both are supported by the data.

B. THE EFFECTS OF SUCCESSFUL DIVERSION ON RECIDIVISM

At the time this study was being conducted, the U.S. Attorney's Office had two diversion programs for first offenders arrested for a misdemeanor (exclusive of any juvenile arrests). If a defendant successfully completed either program, his case was nol prossed (dismissed or "nolled" by the prosecutor). A philosophy behind such programs is that lenient treatment might have a beneficial effect on a person arrested for the first time. Given another chance, he or she hopefully will not return to crime. In this section, we explore how well this objective seems to have been met.

First Offender Treatment (F.O.T.) is the less intensive of the two programs. Persons assigned to this program can complete it in a few weeks. Program requirements include taking a tour of the FBI facilities, observing court facilities, and writing an essay on an assigned topic, such as the importance of marihuana laws. If a person completes all the steps, his case is dismissed on the day it would have gone to

(Cont'd)

are admitting their culpability. "Guilty" of the current crime could lead to more recidivism in the same way that "innocence" leads to less recidivism.

trial. Project Crossroads, the second diversion program, involves supervision and a longer period--usually three to six months. The defendant is assigned to a counselor, who tries to help him find employment, enroll in a school or vocational training program, or otherwise improve his life. The Project Crossroads counselor writes periodic reports to the U.S. Attorney's Office, and in time, makes a recommendation as to whether the defendant's case should be dismissed. Perusal of case jackets seems to indicate that the counselor's recommendation is usually followed.

We can determine through PROMIS whether a defendant was diverted by examining the reasons recorded in PROMIS for dismissals by the prosecutor. The dismissal reason codes include one for successful completion of F.O.T. and one for successful completion of Project Crossroads. We cannot tell which defendants, if any, were assigned to the programs and then dropped out. In looking at the subsequent recidivism of these defendants, therefore, we are looking at the effect of successful diversion, not just diversion. The comparison group is all first offenders arrested for a misdemeanor.

Of the 1,366 first offenders arrested for misdemeanors, 103 (8 percent) successfully completed the F.O.T. program, and 115 (8 percent) successfully completed Project Crossroads. The rearrest rate for persons in either program was below that for other first offenders. Defendants assigned to Project Crossroads had a lower rearrest rate than those assigned to the F.O.T. program.

Percent Rearrested Before
August 31, 1975

Successful in F.O.T.	20%	(103)
Successful in Project Crossroads	16%	(115)
Not in either program	23%	(1,148)
All first offenders	22%	(1,366)

The question is whether the lower rearrest rates are the result of the program or whether they are associated with characteristics of the people who are assigned to the program. The most satisfactory way--from a methodological point of view--to answer this question would be to assign first offenders randomly to each program. Any differences in the rearrest rates could then be attributed to the program itself, rather than the people in the program. It is difficult to perform such experiments in the real world, however. Instead of controlling for the characteristics of the people through random assignment, we tried to control for these factors statistically. Our basic method was to see whether being successfully diverted influenced recidivism after controlling for all the other factors we had available that predict recidivism.

One of the problems of this approach is that it is generally difficult to predict recidivism among first offenders. The recidivism-potential scores in the last chapter lean heavily on criminal history. First offenders, of course, have no known criminal history.

Seven variables in the analysis were found to be associated with recidivism among first offenders. Race, sex, and age were three of the seven. The other four were whether the

first arrest was for drugs, whether it was for gambling, whether the defendant was employed more than six months, and whether the victim was a family member. Defendants with any of these four characteristics were generally less likely to be rearrested than other defendants. Adding a variable for successful completion of the F.O.T. program did not appear to have a significant effect on the likelihood of rearrest. Project Crossroads, however, does appear to have reduced the likelihood of rearrest. These findings are not too surprising, since F.O.T. is shorter and less intensive than Project Crossroads. Project Crossroads seems to be having an impact on the participants. We cannot tell conclusively whether this impact is due to the selection of people into the program, the types of persons who successfully complete the program, or the program itself.

C. SPECIAL ASSIGNMENT OF MISDEMEANOR CASES
TO THE MAJOR VIOLATOR'S UNIT

During the period of this study, a number of the misdemeanor cases brought to the U.S. Attorney's Office were assigned to the Major Violator's Unit, which prosecutes misdemeanor cases involving repeat offenders. Instead of being handled in assembly-line fashion--that is, a different prosecutor picks up the case at each stage of the process--a case sent to the Major Violator's Unit was assigned to a particular prosecutor, who was then responsible for the case through final disposition. Investigative and paralegal resources

were available to prosecutors working in the Unit as they prepared their cases.

This study and the Major Violator's Unit have a purpose in common, namely, to identify serious recidivists. If certain individuals are being targeted with the hope of reducing future crime through incapacitation, it makes sense to choose the people who are most likely to be the serious and frequent recidivists.⁵ Since we know the subsequent rearrest history of the 2,746 defendants who had a misdemeanor case during the panel period, we can see whether the persons targeted by the Major Violator's Unit were the same as those who would have been selected using the raw score shown in Exhibit 12.⁶

Of the 2,746 misdemeanor cases brought to the prosecutor's office during the four-month period of study, 320, or 12 percent were assigned to the Major Violator's Unit. Were these persons the same 12 percent who later became the most serious recidivists? To answer this question, the scale measuring the seriousness and frequency of the future recidivism of these 2,746 defendants (see Exhibit 12) was used to identify the 320 persons (or 12 percent of the misdemeanor defendants) who turned

5

It might be possible that future crime would also be reduced through a general deterrent effect on other criminals.

6

One could argue that if the Major Violator's Unit were truly successful, it would have incapacitated the most serious defendants by obtaining their conviction and incarceration. Since the follow-up period was 32 months and the maximum sentence for a misdemeanor is 12 months, however, even persons receiving the full treatment of the Major Violator's Unit would have had time to recidivate.

out to be the most serious recidivists. Twenty-six percent of this group had been targeted by the Major Violator's Unit.

Assigned to Major Violator's	26%
Not Assigned	74%
Worst Misdemeanor Recidivists	100%
	(320)

This is a larger proportion than would have been assigned if the decision were made on a random basis, but 74 percent of the persons who went on to become serious repeaters were not assigned to the Unit. A consideration, of course, is that some number of cases may have had evidentiary, witness, or other problems that prevented their successful prosecution. In addition, we do not know the extent to which the Major Violator's Unit was trying to focus on future recidivists. Another possibility is that some of the persons who were assigned to Major Violator's were convicted and the experience led them to give up a life of crime.

For comparison's sake, we can see how well the raw prediction score shown in Exhibit 12 would have done in identifying recidivists compared with the Major Violator's Unit. To make the comparison, the worst 12 percent according to the defendant score were selected. The score does better, but still does not get a majority of the worst recidivists.

Chosen by Defendant Score	37%
Not Chosen	63%
Worst Misdemeanor Recidivists	100%
	(320)

It is possible that in order to "capture" the worst recidivists a larger number of people would have to be selected

by a repeat offender unit. We kept increasing the proportion of cases selected (according to the defendant score they would receive based on Exhibit 12) to determine when at least a majority of the worst 12 percent of the recidivists would have been identified. When 20 percent of the defendants were hypothetically selected, 50 percent of the 320 worst recidivists were chosen. Such a result suggests that in order to get more of the most serious recidivists, it might be necessary to select a larger group, to allow for error.

VI. PATTERNS OF CRIME SWITCHING

In Chapter IV, we saw the effects that certain defendant and case characteristics had on the frequency and seriousness of future criminal events. In that analysis, different types of future criminal contact with the criminal justice system were examined in terms of their relative seriousness. An issue not addressed was the extent to which defendants specialize in particular types of criminal activity. A number of theories have been advanced about criminal offender types, but little empirical evidence has been available to test those theories. The evidence that is available largely concerns prison populations. Many persons engaged in criminal careers, however, have yet to be incarcerated. The data in this analysis, therefore, describe a cross-section of arrested persons at different stages in their criminal careers. The data exclude, quite obviously, those who have not yet been arrested and include some persons who have never committed an offense.

The question to be addressed in this chapter is: To what extent do defendants switch offenses between one arrest and another

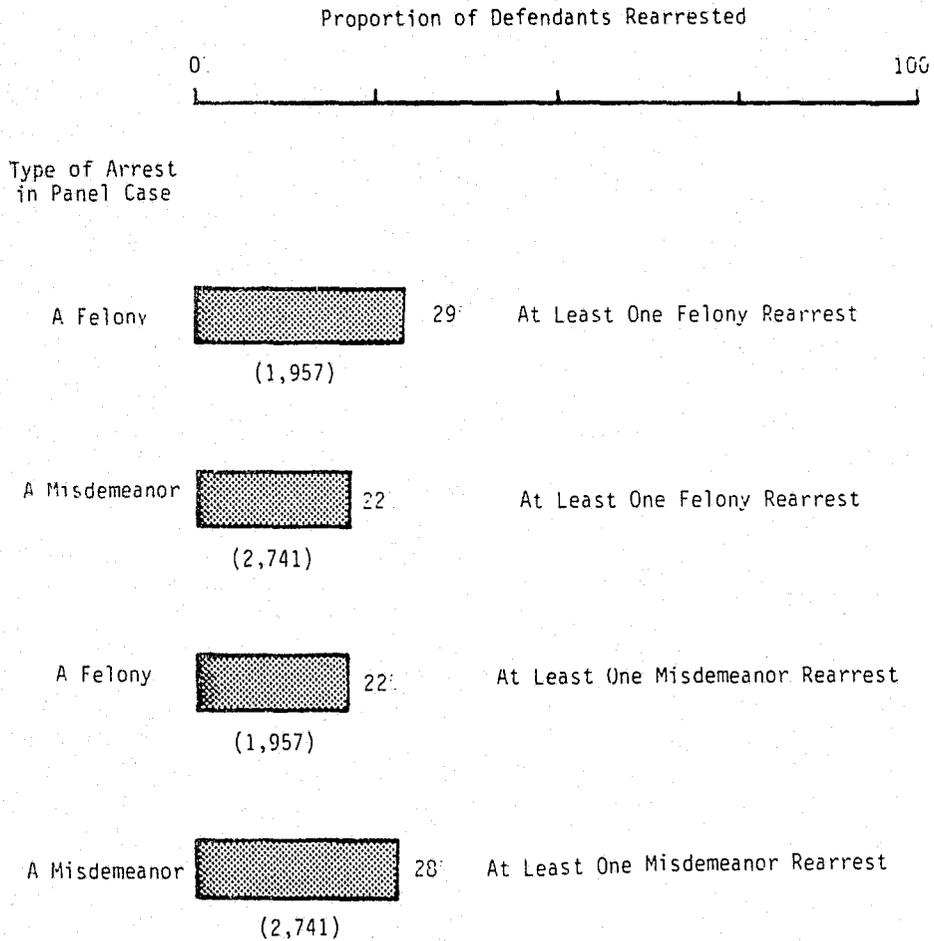
¹ See, for example, Sheldon Glueck and Eleanor Glueck, 500 Criminal Careers (New York: Alfred A. Knopf, 1930); Julian B. Roebuck and Mervyn L. Cadwallader, "The Negro Armed Robber as a Criminal Type: The Construction and Application of a Typology," Pacific Sociological Review, vol. 4 (Spring, 1961), pp. 21-26. More recently, the Rand Corporation analyzed 49 convicted robbery offenders, Joan Petersilia, Peter W. Greenwood and Marvin Lavin, Criminal Careers of Habitual Felons (Santa Monica: The Rand Corporation, 1977). Two important exceptions that have looked at arrest records are the work of Wolfgang, Figlio, and Sellin on juvenile offenders in Delinquency in a Birth Cohort (Chicago: University of Chicago Press, 1972), especially Chapters 9-12; and the work of the National Commission on the Causes and Prevention of Violence, which analyzed adult offenders, Donald J. Mulvihill and Melvin M. Tumin, Crimes of Violence, Vol. II (Washington, D.C.: Government Printing Office, 1969).

rather than specialize in a particular type of offense? Patterns of crime switching will be examined in regard to the misdemeanor-felony distinction and in regard to crime type (burglary, assault, and so on).

The extent to which defendants switch between felony and misdemeanor offenses is relevant to police and prosecution programs set up to respond to "career criminals." If there is considerable crime switching, an offender with a very serious background may, at times, be arrested for a misdemeanor. In this event, a career criminal program that targeted only felony offenders would not "snare" this career criminal.

The data seem to indicate that some defendants do specialize in misdemeanors or felony offenses, but that many are arrested for a felony one time and a misdemeanor the next. Overall, 41 percent of the felony defendants were rearrested and 37 percent of the misdemeanor defendants were rearrested, without taking opportunity time into account. Were the felony defendants consistently rearrested for a felony, and the misdemeanor defendants for a misdemeanor? The answer is no. Twenty-two percent of the persons arrested in their panel case for a misdemeanor had a later arrest for a felony and 28 percent had a later arrest for a misdemeanor. Of the felony panel defendants, 29 percent had a later arrest for a felony and 22 percent had a later arrest for a misdemeanor (Exhibit 14). The general conclusion that can be drawn is that misdemeanor arrests are more likely to follow misdemeanor

Exhibit 14. Proportion of Defendants Rearrested for a Felony or Misdemeanor
According to Whether the Initial Arrest was a Felony or Misdemeanor:
Superior Court, District of Columbia



Source: Prosecutor's Management Information System (PROMIS)

arrests, and felony arrests are more likely to follow felony arrests, but this is by no means a rigid pattern. Many defendants seem to switch back and forth. This is not very surprising, since the distinction between felonies and misdemeanors is not primarily a behavioral one, but a legal one, based on specific charging conventions. When we look at different types of offenses, the patterns become more distinct.

Arrests can be categorized according to the most serious charge brought by the police or the prosecutor against a defendant. The initial breakdown shown in Exhibit 15 is into violent, property, and victimless crimes. Within these groups, more specific crime categories (such as robbery or gambling) are shown.

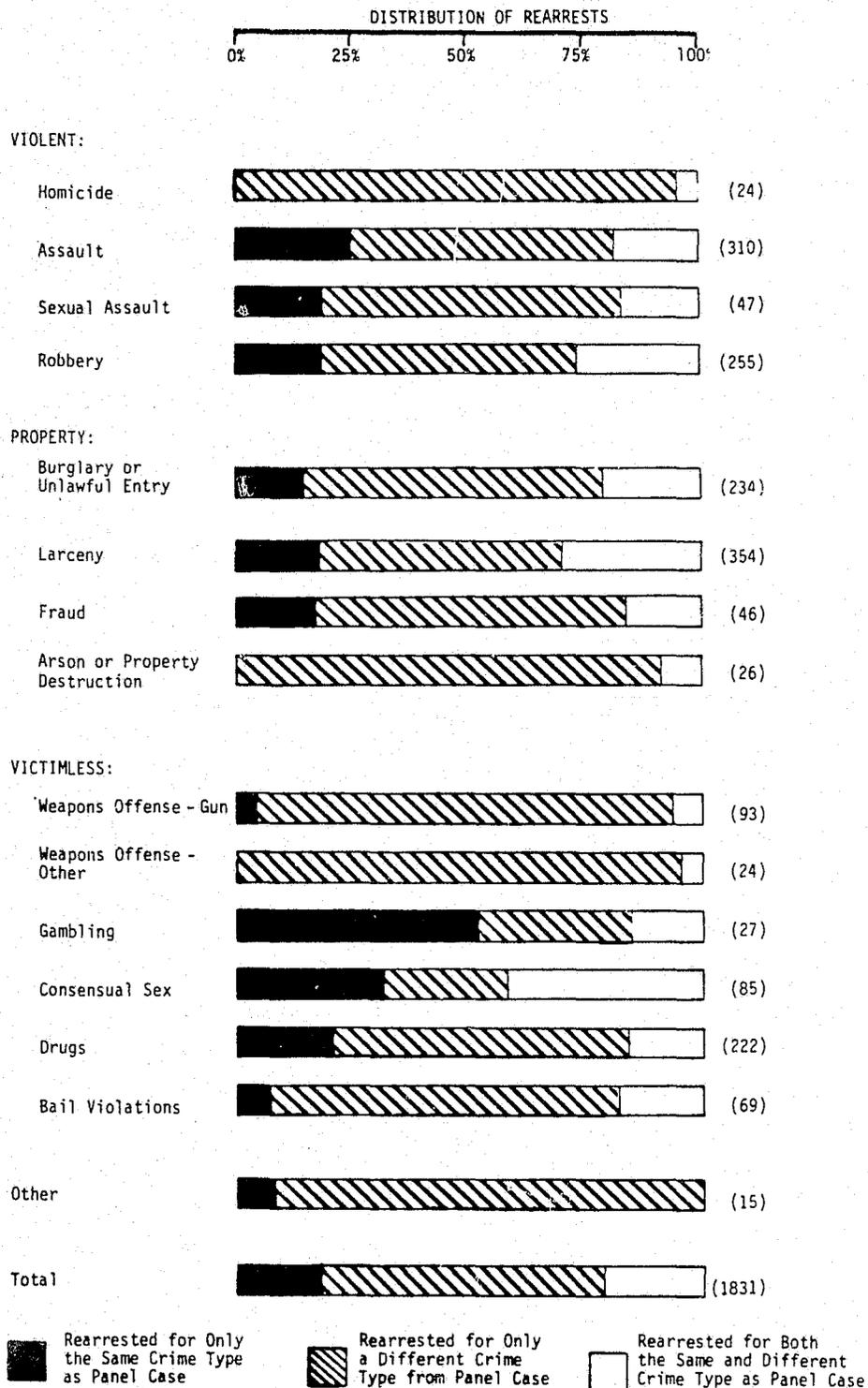
Exhibit 15 addresses the question of whether panel defendants were rearrested for the same type of crime as their panel arrest. The exhibit shows the patterns of rearrests for defendants, distributed into three groups:

- . defendant rearrested only for the same type of crime as the panel case,
- . defendant rearrested only for a different type of crime from the panel case, and
- . defendant rearrested for both the same and different types of crime as the panel case.

Obviously, only defendants who had at least one rearrest could be classified in this way.² For the 1,831 defendants

²It should also be remembered that since many defendants had only one rearrest, we are not able to speak of the arrest chains here as being entire "criminal careers."

Exhibit 15. Specialization of Defendants in the Same Type of Crime
(Washington, D.C.)



Source: Prosecutor's Management Information System (PROMIS)

who were rearrested, 18 percent had rearrests only for the same crime, 61 percent had rearrests only for a different crime, and 21 percent had rearrests for both the same and different types of crimes. When we consider that we are looking only at a short span in a criminal career, this seems to indicate little specialization.³ In addition, to the extent that police tend to rearrest an individual if he is known to have committed a given type of offense, the specialization we are seeing may be exaggerated. The proportions of defendants with rearrests for the same crime varies considerably for different types of panel arrests. However, it is clear that there is a considerable amount of crime switching.

For some types of offenses, very few defendants could be said to be "specialized," that is, their arrests during the two and one-half year period were always for the same crime. This was true for homicide, arson or property destruction, weapons offenses, and bail violations. If the defendants in these crimes were rearrested, which we saw in the previous chapter was not particularly likely, it was generally for a different type of offense.

At the opposite extreme, a few crime categories did seem to attract defendants who were quite specialized. Gambling and consensual sex offenses (prostitution) were two such crime types. In the previous chapter, we also saw that persons

³These findings are similar to those obtained by Wolfgang, Figlio and Sellin; Mulvihill and Tumin; and Petersilia, Greenwood and Lavin; cited in footnote 1.

arrested for gambling were less likely than most other defendants to be rearrested for serious crimes in the future.⁴ If they are rearrested, it is likely to be for another gambling offense. Prostitutes, on the other hand, are quite likely to be recidivists, but not for serious crimes--one-third of these arrestees were rearrested only for prostitution. The other types of crimes for which these defendants are rearrested are discussed below.

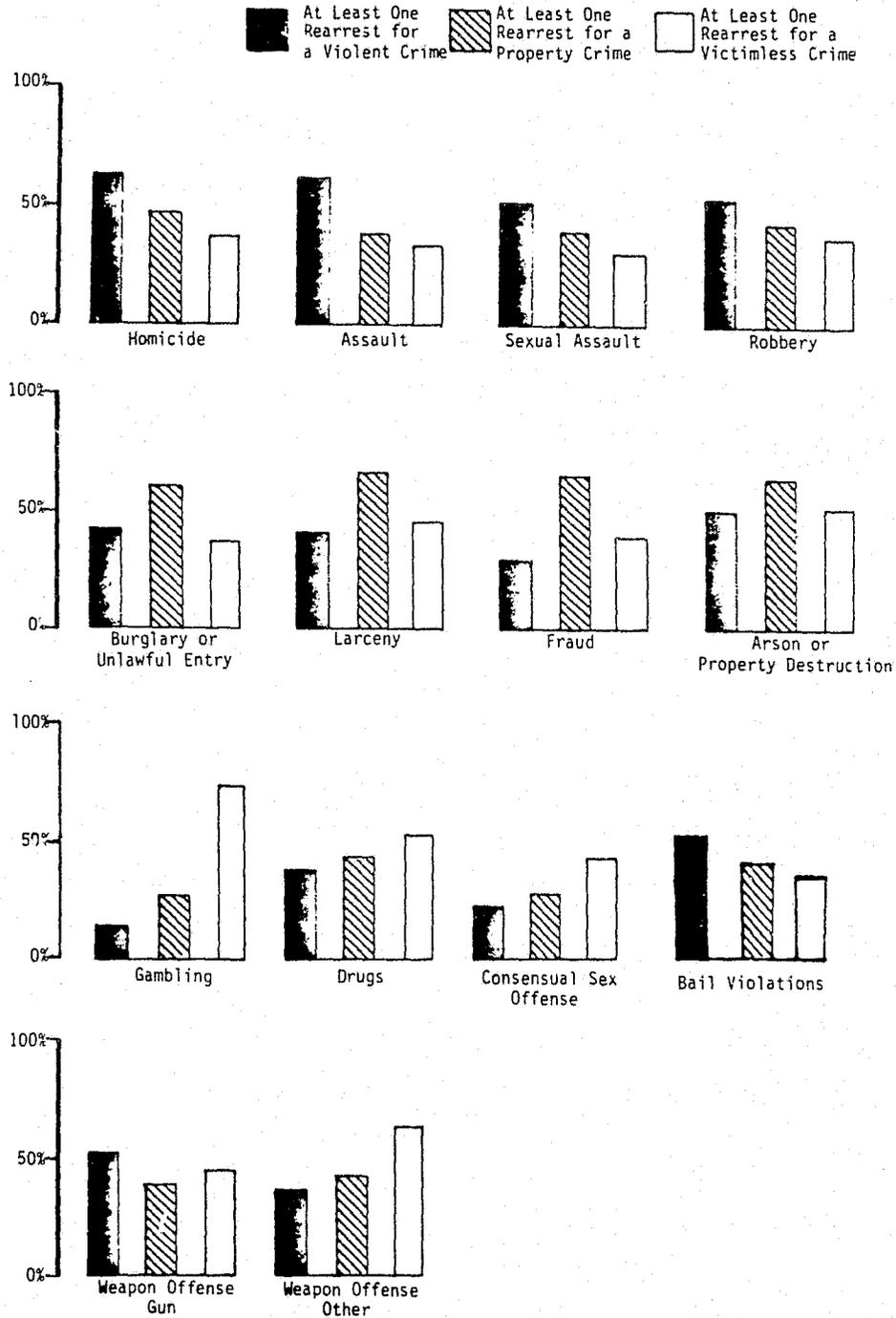
For many of the other crimes not yet mentioned in this discussion (assault, sexual assault, robbery, burglary, larceny, fraud, and drugs), the rearrest rate for the same type of crime was between 15 and 25 percent. This certainly casts some doubt on such ideas as classifying defendants as "robbers" or "burglars" and basing police investigation procedures on the notion that most offenders have a particular modus operandi. More than 75 percent of the panel defendants who recidivated switched crimes under this classification system.

Although a distinction of "robber" or "burglar" is too narrow, it is possible that there are discernible patterns, for broader offense types. Exhibit 16 seems to suggest that such a distinction is meaningful, at least for violent and property offenses. The exhibit shows the proportion of rearrested defendants, by panel offense,

4

See Exhibits 7 and B-1. Persons arrested for gambling were found to be significantly less likely to recidivate than persons arrested for burglary, larceny, robbery, consensual sex, and assault offenses. Only persons arrested for drug offenses showed up as significantly less likely to recidivate than gambling arrestees.

Exhibit 16. Percentage of Defendants Rearrested After the Panel Case for a Violent, Property, or Victimless Crime (Washington, D.C.)



Source: Prosecutor's Management Information System (PROMIS).

who had at least one rearrest for a violent crime, a property crime, or a victimless crime. These proportions are neither mutually exclusive nor collectively exhaustive, hence the percentages do not total 100 percent. Violent-crime arrestees had the highest proportion of rearrests for violent crime; property-crime arrestees had the highest proportion of rearrests for property crime. Although violent and property offenders are frequently rearrested for the same broad class of offenses, they are also frequently rearrested for the other broad classes of offenses. At least 30 percent of those arrested for a violent or property offense in their panel case, for example, were rearrested for a victimless crime.

Moving to those defendants whose initial arrest was for neither a violent nor property crime, the pattern is not as clear. For those weapons-possession offenses involving a gun, the highest proportion of defendants were rearrested for a violent offense. Persons involved in gun offenses do not appear to be frequent recidivists. When they are rearrested, however, it is likely to be for a violent crime. For those whose panel arrest was for a weapons offense other than a gun, this was not true. Two-thirds had a rearrest for a victimless crime, and only one-third had a rearrest for a violent crime.

We noted above that gamblers and consensual sex defendants had the highest proportion of rearrests for the same crime and no other crime. These two groups of defendants also had the two lowest proportions of rearrests for a violent crime.

Perhaps the most unexpected finding is that persons whose panel arrest was for a bail violation had the highest proportion of rearrests for a violent crime, rather than a property crime or a victimless crime. This result surely warrants a review of the policies pertaining to bail in the District of Columbia.⁵

Although it is difficult to form classifications of strings of offenses, particularly if there is considerable crime switching, we can at least look at the transition from one type of arrest in the panel case to another. This can answer some of the questions raised earlier as to the exact types of crimes to which persons switch.

Exhibit 17 shows the distribution of rearrests after the panel case according to the crime type of the panel case. As noted earlier, the least "specialized" defendants were those arrested in their panel case for homicide, arson or property destruction, weapons-possession offenses, and bail violations. Beginning with homicide, we see that the most likely type of rearrest is for assault. Since a homicide may be seen as a random event that occurs during an assault, this finding makes good sense. It is noteworthy that the second most frequent type of rearrest after homicide was for a weapons-possession offense. The assault arrests and the weapons arrests suggest that some homicide defendants are potentially dangerous, even

5

This issue is treated further in Publication no. 16 of the PROMIS Research series.

Exhibit 17. Types of Crimes for Which Defendants Were Rearrested After the Panel Case
According to Crime Type of the Panel Case:
Washington, D.C.

Type of First Rearrest After Panel Case	Type of Arrest in Panel Case													
	Homicide	Assault	Sexual Assault	Robbery	Burglary or Unlawful Entry	Larceny	Fraud	Arson and Property Destruction	Weapons Offense Gun	Weapons Offense Other	Gambling	Consensual Sex	Drugs	Bail Violations
Violent:														
Homicide	4%	2%	2%	2%	2%	1%	---	---	3%	---	---	1%	2%	---
Assault	25%	35%	9%	11%	10%	11%	13%	15%	18%	13%	---	8%	7%	13%
Sexual Assault	4%	3%	23%	3%	3%	2%	2%	4%	2%	---	4%	---	2%	6%
Robbery	8%	8%	13%	27%	14%	10%	6%	15%	15%	13%	11%	2%	14%	19%
Property:														
Burglary or Unlawful Entry	8%	11%	17%	10%	23%	10%	2%	23%	9%	13%	4%	1%	10%	7%
Larceny	8%	15%	17%	13%	17%	35%	20%	15%	12%	13%	15%	6%	15%	14%
Fraud	8%	1%	---	2%	3%	3%	28%	---	4%	---	---	1%	5%	1%
Arson or Property Destruction	4%	1%	---	1%	3%	2%	---	4%	3%	4%	---	---	1%	---
Victimless:														
Weapons Offense - Gun	17%	4%	---	5%	6%	3%	2%	---	8%	8%	---	2%	4%	4%
Weapons Offense - Other	4%	2%	---	2%	1%	1%	2%	---	2%	---	---	2%	1%	1%
Gambling	---	1%	---	---	---	1%	---	---	1%	---	59%	1%	1%	---
Consensual Sex	---	3%	---	2%	1%	3%	2%	---	---	---	---	55%	4%	10%
Drugs	4%	8%	6%	12%	7%	7%	13%	4%	12%	13%	7%	5%	27%	9%
Bail Violation	4%	5%	11%	6%	9%	8%	6%	15%	11%	17%	---	13%	8%	13%
Other	---	1%	2%	4%	3%	1%	2%	4%	---	8%	---	1%	1%	1%
TOTAL	100% (24)	100% (310)	100% (47)	100% (255)	100% (181)	100% (374)	100% (46)	100% (26)	100% (93)	100% (24)	100% (27)	100% (85)	100% (222)	100% (69)

Source: Prosecutor's Management Information System (PROMIS)

VI-11-11

though the probability of another homicide soon after the initial one seems low--surely due in part to the higher rate of incarceration of these defendants.

The most common type of rearrest after arson or property destruction was burglary or unlawful entry. Additionally, 15 percent of the rearrests were for robbery, and 15 percent were for larceny. This indicates that for those who did recidivate after an arson or property-destruction arrest, over half of the rearrests were property-motivated. For these defendants, the initial arson or property destruction charge may have arisen from an attempt to acquire property, rather than to destroy it. For example, a person might set a fire while attempting a burglary, or be charged with destruction of property when burglary cannot be proven.

Weapons offenders who are rearrested are an important group to examine. A fundamental purpose of the statutes against carrying a gun or dangerous weapon in the District of Columbia, as elsewhere, is presumably to prevent harm due to the use of weapons in crime.⁶ Only weapons-possession offenses were considered in the analysis, as opposed to offenses involving the use of a weapon. The central question is whether the persons who are being arrested for weapons possession are frequently criminals, or whether they are generally law-abiding citizens who keep a weapon to defend themselves. Part of the answer to this question

6

This topic is addressed in more detail in the companion report by Philip J. Cook and Daniel Nagin, Does the Weapon Matter? An Evaluation of a Weapons-Emphasis Policy in the Prosecution of Violent Offenders, PROMIS Research Publication no. 8 (INSLAW, forthcoming).

is indicated by the analysis in Chapter IV, which showed no effect on recidivism if the panel case was a weapons offense. A separate question is whether those weapons arrestees who do repeat tend to be arrested for serious crimes. Weapons offenses involving a gun and those involving another type of weapon show similar results. The most common rearrest after a gun offense was for assault, and the second most common was for robbery. For weapons offenses involving something other than a gun, a bail violation was most common.⁷ Assault, robbery, burglary and larceny, and drug offenses were the next most frequent rearrests (13 percent each). These results are consistent with those of Cook and Nagin: persons who are arrested for weapons offenses, when subsequently rearrested, are often charged with a serious offense.⁸

The last type of crime for which the proportion of rearrests for the same crime was low was bail violations. This, of course, is not surprising since a bail violation involves a previous arrest. Examining the rearrest patterns does give an indication, however, of the dangerousness of persons who violate the conditions of their release. Exhibit 17 indicates

7

In fact, this crime group involved a higher subsequent proportion of arrests for a bail violation than after any other crime group. However, the number of these instances--four--makes it impossible to draw a strong conclusion about this.

8

Cook and Nagin also found a class of violence-prone defendants among the weapons offenders they studied; such defendants may warrant more targeting of criminal justice resources than are presently aimed at persons charged with possessing a weapon illegally.

that almost one-fifth of the rearrests following a bail violation were for robbery; assault and larceny were also well represented, followed by rearrest for prostitution.

A final observation on the distribution of rearrests concerns the similarity among profiles of rearrests for assault, robbery, burglary, and larceny. We saw in the Chapter IV that persons arrested for these crimes in the panel case were more likely to be rearrested. (Rearrests after an assault, robbery, burglary, or larceny accounted for 61 percent of the rearrests of the entire panel group.) The percentages of rearrests after each of these four types of crime are quite similar, with the variation being in the percentages of rearrests for assault, larceny, robbery, and burglary. For example, we saw in Exhibit 16 that robbery arrestees were more likely than burglary or larceny defendants to be rearrested for a violent crime. But we can see in Exhibit 17 that this is due primarily to the high proportion of robbery arrests that are followed by another robbery. The proportion of rearrests for homicides, sexual assault, and assault is the same, regardless of whether the panel case was robbery, burglary, or larceny. The same is true for rearrests for property crimes. The proportion of rearrests for property crimes is higher after burglary or larceny than after assault or robbery because of the propensity to repeat the same crime. The distribution of rearrests for victimless crimes is quite similar for assault, robbery, burglary, and larceny. Although violent offenders often repeat in the violent offenses group, as do property offenders in

the property offense group, it seems that specific criminal types, such as a "professional robber," are not very common in the District of Columbia, or at least such persons are not being arrested. Instead, we seem to have a highly recidivistic group of defendants who alternate among a number of specific types of offenses.

VII. SUMMARY AND IMPLICATIONS FOR FURTHER RESEARCH

Data covering a 56-month period in the District of Columbia confirm that a small proportion of arrestees account for many of the adult arrests in the jurisdiction. The question we have been most concerned with is whether the persons most likely to have further contact with the criminal justice system can be identified in advance.

Certain characteristics of defendants, readily identifiable at initial case screening, were found to be associated with their future recidivism. While the results varied somewhat according to the particular measure of recidivism being used--rearrest, re prosecution, or reconviction--and according to the group being studied--felony or misdemeanor defendants--many variables were consistently related to recidivism. Beginning with the current offense type, burglary was one such variable. Defendants whose current arrest was for felony burglary or misdemeanor burglary (attempts) were found to be highly likely to recidivate. An arrest for robbery was also a significant predictor of recidivism whenever a defendant whose panel case was a felony was being considered. Defendants with an arrest record who were arrested in the panel case for larceny or a misdemeanor drug offense and defendants arrested for assault were also likely to recidivate, although the effects of these variables were not as uniform as those of the variables above. Prostitution was also a significant predictor, but mainly of further rearrests for prostitution.

The association between current offense type and the likelihood of recidivism has implications for career criminal programs. The offenses that "career criminals" in the District of Columbia seem to be involved with are, in approximate order of importance: burglary, robbery, larceny (if not a first offender), misdemeanor drug offenses (if not a first offender), and assault. Targeting on other crimes, such as homicide and sexual assault, may be appropriate for other reasons, but such a concentration for a "career criminal" program is not supported by this research.

Moving to variables that describe a defendant's criminal history, the results were less specific because of the high intercorrelations among these variables. Indeed, a remarkable finding was that so many highly related items could all be significant in the analysis. Number of previous arrests, whether arrested in the past five years, and number of convictions were almost always important predictors of recidivism. Another criminal history variable worthy of note was whether an alias was used. There is reason to believe that there is error in this variable in that the police may consider a nickname to be an alias, but despite this, use of an alias was a significant predictor in most of the analyses. Three types of arrest in the two years preceding the current arrest also predicted recidivism. A previous arrest for burglary increased the recidivism potential, while one for a

misdemeanor drug offense decreased the potential. (The latter result was found only after other factors were controlled.) Whether the defendant was arrested in the past two years for larceny was significant, but only for defendants whose panel case was a misdemeanor.

Several other variables have possible policy significance. The defendant's employment status was generally quite significant. Perhaps lack of a job leads to more crime to support oneself, or perhaps lack of a job is an indicator of a proclivity for an illegal lifestyle. In either event, it is a good predictor of recidivism. Police indication of drug use also was consistently a predictor of future recidivism. There is probably some variation in the types of drugs associated with recidivism, but this could not be tested in the analysis without better data on the types of drugs used by the defendant. Whether the victim and defendant knew each other at the time of the offense was predictive of less recidivism, in terms of reconviction. We cannot be sure whether the low conviction rate for nonstranger offenses is contributing to this finding.

The ability of the above variables to predict recidivism varied by the measure of recidivism used. When rearrest or reprosecution was the measure, the prediction accuracy was

better than when it was reconviction. There are many possible explanations for this result. One is that rearrest and re-prosecution are closer to actual repeated criminal behavior than reconviction. For example, we found that 39 percent of the defendants had another arrest within a 32-month period. If we knew the proportion of defendants who actually committed new crimes, this proportion would be even higher. To the extent that those not counted as recidivists really are recidivists, error is created in the results. If we measure reconviction, the error is magnified because many of those who did commit new crimes and who were arrested will not be convicted. Another explanation for the less predictive reconviction result is that the time period for testing this measure was too short. It takes a while for a case to reach final disposition. Many of the defendants in the analysis were rearrested, but their cases were not adjudicated within the time frame of the data. Reconviction could be examined more accurately by continuing to follow these defendants for a longer period of time.

The accuracy of the prediction of recidivism also varied by whether felony or misdemeanor offenses were considered. It was easier to identify likely recidivists among misdemeanor arrestees than among felony arrestees. Perhaps this is because the misdemeanor arrestees tend to be one of two extremes: some are first offenders arrested for a minor offense

and others are defendants with long criminal histories who happened to be arrested for a misdemeanor.

The accuracy of the recidivism prediction presented in Chapter IV for all 4,703 defendants indicates that the raw score shown in Exhibit 7 can help to identify which defendants will become the serious recidivists. As would be expected, the prediction is not without error. Some persons who become serious recidivists cannot be identified, and others who are predicted to be serious recidivists do not become so. For this reason, it seems that concentrating on a group somewhat larger than the actual target population might be necessary if the target population is to be included.

A number of case-processing decisions were examined for their impact on the likelihood of recidivism: final disposition, diversion, and referral to the Major Violator's Unit. The only final dispositions found to affect the probability of recidivism were whether the defendant was found not guilty at trial and whether the case was ignored by the grand jury. Defendants receiving these dispositions were less likely to recidivate. It is possible that a third variable, "innocence" of the current crime, really leads to these types of dispositions and to less recidivism, rather than an intrinsic effect of the disposition decision itself.

Two diversion programs for first offenders were evaluated in terms of their effects upon recidivism. Successful

completion of the First Offender Treatment program appeared to have no effect on recidivism. Rearrest rates were only slightly lower among this group than among all first offenders, and when other variables were controlled for, the effect disappeared. Defendants in Project Crossroads, a more intensive program, had a considerably lower rearrest rate than other first offenders, and when other variables that predict recidivism for first offenders were included in the analysis, the effect appeared strong. This appearance of success for the program must be considered tentative. Prediction of recidivism for first offenders was not very accurate; therefore it was not possible to distinguish adequately whether the effect was from the program or from the selection of people into the program. The best way to test the effectiveness of the Project Crossroads program would be to assign eligible persons randomly to the program and to a control group and, later, measure the amount of recidivism within the two groups.

Selection of misdemeanor defendants for the Major Violator's Unit was evaluated in terms of whether the major future recidivists were identified, recognizing that future recidivism might not have been one of the selection criteria. It would seem, however, that this should be the criterion if preventing future crime is the goal of the program.

The results of the analysis showed that the Major Violator's Unit did select defendants who were likely to recidivate, and did so at a rate considerably greater than chance. However, using a score based on the results in this report might improve the prediction. It would be interesting and worthwhile to test this possibility during a different time period.

Turning now to the patterns of crime switching exhibited by the defendants who did recidivate, we found some propensity for felons to commit more felonies and for misdemeanants to commit more misdemeanors, but the effect was not that strong. Many times the pattern seemed to be one of alternation between felonies and misdemeanors. This suggests that career criminal programs that target only on persons arrested for a felony may be missing many serious repeat offenders.

The notion of the "professional robber" or "professional burglar" was not supported by this analysis. While there was some tendency for violent and property offenders to specialize, few defendants were arrested for only one type of crime. This finding is particularly striking in that not that much time was allowed for a person to recidivate. The fact that defendants who are rearrested are not arrested for the same crime in a given year probably indicates even more variety over a criminal career.

Some of the defendants were more specialized than others. Gambling and prostitution defendants were among the most

specialized. If these defendants were rearrested, the arrest was unlikely to be for an offense that differed from the panel offense. Rearrests for violent crime, in particular, were infrequent.

Defendants arrested for weapons-possession offenses were not found to be more likely to recidivate. However, if they were rearrested, it was often for a violent crime. Assault and robbery were the most common offenses for which rearrests were made. This is of importance in considering how to handle persons arrested for carrying a gun or other illegal weapon. It seems that the majority of such persons are not career criminals who go on to become serious repeat offenders. If a weapons-possession defendant has other characteristics that identify him as a potential recidivist, however, his future rearrests are likely to be for serious crimes.

Another crime showing much the same pattern as weapons offenses is bail violations. Although the likelihood of recidivism is not high for these defendants either, if they are rearrested it is likely to be for a violent offense or for larceny.

Homicide arrestees were no more frequently rearrested for homicide than any other defendants. However, violent tendencies do seem indicated by the high proportion of rearrests for assault and weapons offenses.

A finding that reinforces the earlier discussion of types

of crime that predict recidivism is that highly recidivistic defendants appear to alternate among four types of crime in particular: assault, robbery, burglary, and larceny. The rearrest patterns after each of these crimes are quite similar. The only differences are slight: defendants arrested for robbery and assault are more likely to be rearrested for a violent crime, and those arrested for burglary or larceny are more likely to be rearrested for a property crime.

The analysis in this report suggests several avenues for further research. One area for investigation is whether the findings presented here for arrested persons can be generalized to the criminal population. Although we found that a small proportion of arrested persons account for a large share of the arrests, we do not know whether this is true for criminal behavior in general. Can we attribute a large portion of reported crime to a small number of persons? To address this question, the behavior of persons not having contact with the criminal justice system would have to be studied.

Further research might be able to improve the accuracy of the prediction in a number of ways. However, it should be noted at the outset that our results are similar to those obtained in prior analyses of prison populations. It may be that any of the improvements suggested here would have little impact on the results.

One possible improvement would be to include juvenile

criminal history variables. This would correct for persons who appear to be first offenders, but who actually have delinquency records. There are legal difficulties with the collection and use of such data, however. Inclusion of other independent variables, such as the education of the defendant, might also improve prediction. Following the panel for an additional period of time might also increase predictive accuracy by not counting as nonrecidivists persons who would eventually recidivate given a longer followup period. Another possibility would be to improve our measure of recidivism by obtaining measures of other crimes committed by our panel group for which no arrest was made. This involves severe technical difficulties, however.

In addition to refining variables included in the analysis, we could also apply different statistical techniques in the analysis to see whether a better scale could be formed. The evaluation of different methods of scale construction could be based on the ability of each method to predict future criminal behavior of a sample of District of Columbia arrestees.

In addition to possible improvements in the D.C. analysis, there is a need for validation of this research in other geographic areas. The District of Columbia has some unique demographic characteristics, which might make results obtained for this area different from those obtained elsewhere. After the

results presented here are transformed into a recidivism-prediction scale, that scale could be used elsewhere to see whether it successfully identifies the worst recidivists.

Prosecution in major cities in the United States involves making many hard policy decisions about how to allocate resources. There are simply too many cases for all of them to receive concentrated attention. Choices about which ones should receive special attention have to be made based on a variety of criteria, one of which could be recidivism potential. Career criminal programs will not have an effect on future crime if the people who are targeted are in fact not likely to repeat. This report has described patterns of recidivism within one urban jurisdiction. While our ability to identify persons who truly are "career criminals" now exceeds random identification by a considerable degree, much work remains to be done.

CONTINUED

1 OF 2

APPENDIX A

DATA ADDED TO THE PANEL FILE

The original data in the panel file contained case records from PROMIS for up to 5 prior arrests in 1971 and 1972 and up to 20 subsequent arrests between the time of the panel case and August 31, 1975. In order to find out whether defendants were incarcerated prior to trial or after conviction in any of their cases, two separate data collection efforts were undertaken.

The first such effort was aimed at finding out if defendants were ever incarcerated prior to trial during the period of study. A data file was made of all cases in which the defendant was not released on his own recognizance at the initial arraignment for misdemeanors, or at presentment for felonies. Cases in which the defendant was released on recognizance were not processed any further. The other 3,387 cases were searched for in the court records. Dates were recorded when a defendant was put in jail and released from jail. From these data, the number of days a defendant was in jail for a particular case were computed. Next, the cases were aggregated based on the defendant. All the records of defendants with more than one case were manually examined in order to avoid counting the same time in jail more than once. This produced a single variable, which was added to the defendant-based file. The variable added was the time in days that a defendant was incarcerated prior to trial in any of his cases before August 31, 1975.

The other data item that was collected was whether a defendant spent any time in prison following a conviction. To obtain this information, a file was made of all defendants who had at least one conviction. Sentences were obtained for these 2,184 defendants in several stages. Sentences for cases in 1972 and 1975 were obtained through a manual search of court records. Sentences for cases in 1973 and 1974 were obtained by using a data file of sentences provided by the court. Finally, all years of sentencing data were merged. The defendant was assumed to serve his minimum sentence. As with the bail data, defendants with more than one conviction were checked to be sure the same prison term was not counted twice. A variable was created measuring the total time in days a defendant spent in prison from the time of his initial arrest until August 31, 1975.

APPENDIX B

MULTIVARIATE ANALYSIS OF THE PROBABILITY OF RECIDIVISM

The Dependent Variable

The construction of dependent variables to measure both the frequency and seriousness of recidivism involved a number of procedures. First, each subsequent arrest was weighted for seriousness by two methods. One was to use, for each offense, the Sellin-Wolfgang index, which is a measure of crime seriousness based on characteristics of the event, such as the number of persons injured, the number hospitalized, and the amount of property taken. The second measure was the maximum possible sentence for the most serious charge initially brought by the police.

Measuring the frequency of recidivistic events involved obtaining information on when defendants were not incarcerated, so that recidivism could be adjusted by the opportunity time to recidivate. For a description of these procedures, see Appendix A. The amount of time during which a defendant had an opportunity to be rearrested was computed by subtracting his days of incarceration, both before and after conviction, from the total time he had from his panel arrest until August 31, 1975. The preliminary dependent variable was:

$$\frac{\sum_{i=1}^n S_i}{T-J-P}$$

where S_i = the seriousness of the i th subsequent arrest

T = the time in days from the date of the panel arrest to August 31, 1975, divided by 365.

J = the total time in days that the defendant spent in jail awaiting trial before August 31, 1975, divided by 365.

P = the total time in days that the defendant was incarcerated following conviction and before August 31, 1975, divided by 365

n = the number of subsequent rearrests.

Further refinements were made in this variable. In order to distinguish between defendants who had a long time "on the street" (i.e., not incarcerated) without having a rearrest from those who had only a short time on the street without a rearrest, a small constant (.001) was added to the numerator. The values of the constants were chosen so that those who were rearrested would have higher scores than those who were not rearrested. Thus, if one defendant had 900 days to be rearrested, his score would be .0004, while a person who had a week would have a score of .0521. In order to keep from dividing by "0," if the defendant was in jail or prison from arrest until August 31, 1975, a small constant was also added to the denominator. We now have:

$$\frac{\sum_{i=1}^n S_i + .001}{T-J-P+.01}$$

This produced a scalar variable. Some defendant scores were extremely high using this formula. Taking the natural logarithm of the dependent variable produced results with a much higher R^2 . We have as a final formula:

$$\ln \left[\frac{\sum_{i=1}^n S_i + .001}{T-J-P+.01} \right]$$

This appears to be a very complicated index of recidivism. One might wonder whether the results are robust if the formula is changed slightly. In fact, the formula makes little practical difference. In the preliminary stages of the analysis, other dependent variables were tested, including a dichotomous dependent variable (did the defendant have any rearrests or not). The R^2 obtained with such a dependent variable was .11 to .13, rather than .20. However, almost all of the same variables were significant. The formula was constructed in order to take seriousness and opportunity time into account. The results do not seem to indicate that this method of constructing the dependent variable produces results much different from simpler procedures.

Independent Variables

Many variables were considered as possibly affecting recidivism. These are listed on the following page, although not many of them appear in the final equations, for reasons

given below. In addition, many interaction terms were tested, and some variables, such as defendant age, were coded in various ways.

Defendant Characteristics

- . Defendant age
- . Defendant race
- . Defendant sex
- . Whether the defendant was a resident of the District of Columbia
- . Whether the defendant is known to use opiates, or whether drugs were recovered at the scene of the arrest
- . Whether the defendant abuses alcohol
- . Whether the defendant is employed
- . Whether the defendant is unemployed
- . Whether the defendant has never been employed
- . Whether the defendant has been employed for six months or less

Criminal History

- . Number of Previous arrests
- . Number of arrests for crimes against persons
- . Whether the defendant was on probation or parole at time of his or her panel case
- . Whether the defendant was on bail at the time of his or her panel case
- . Number of arrests in the past two years
- . Whether the defendant has an arrest record
- . Whether the defendant was arrested in the past five years

- . Number of convictions in 1971 and 1972
- . Number of papered cases in 1971 and 1972
- . Whether the defendant uses an alias
- . Whether the defendant's first arrest was for auto theft
- . Whether the defendant was arrested in the past two years
- . Whether the defendant had a previous arrest for a crime of violence
- . Whether the defendant was arrested for homicide in the past two years
- . Whether the defendant was arrested for assault in the past two years
- . Whether the defendant was arrested for sexual assault in the past two years
- . Whether the defendant was arrested for robbery in the past two years
- . Whether the defendant was arrested for burglary or unlawful entry in the past two years
- . Whether the defendant was arrested for larceny in the past two years
- . Whether the defendant was arrested for fraud in the past two years
- . Whether the defendant was arrested for arson or property destruction in the past two years
- . Whether the defendant was arrested for weapon-possession offense (gun) in the past two years
- . Whether the defendant was arrested for weapon-possession offense (other) in the past two years
- . Whether the defendant was arrested for gambling in the past two years
- . Whether the defendant was arrested for a consensual sex offense in the past two years

- . Whether the defendant was arrested for a drug offense in the past two years
- . Whether the defendant was arrested for a bail violation in the past two years
- . The seriousness of the panel case (Sellin-Wolfgang Index)
- . The seriousness of the panel case (maximum sentence)
- . Whether the panel case was a felony
- . Whether the victim and defendant were in the same family
- . Whether the victim and defendant were friends
- . Whether the victim and defendant were strangers
- . Whether the panel case was a homicide
- . Whether the panel case was an assault
- . Whether the panel case was a sexual assault
- . Whether the panel case was a robbery
- . Whether the panel case was a burglary
- . Whether the panel case was larceny
- . Whether the panel case was arson or property destruction
- . Whether the panel case was fraud
- . Whether the panel case was a weapons-possession offense (gun)
- . Whether the panel case was a weapons-possession offense (other)
- . Whether the panel case was gambling
- . Whether the panel case was drugs
- . Whether the panel case was a consensual sex offense

- . Whether the panel case was a bail violation
- . Whether the defendant successfully completed a diversion program in the panel case

The analysis proceeded in several stages. First, all of the independent variables were entered in a regression equation. Those showing little predictive power were eliminated. Next, many interaction terms were entered in the equation and several new variables turned out to have significant effects. Since many of the variables were highly correlated, especially the criminal history variables, there were severe problems of multicollinearity. Some variables were interchangeable for this reason. Variables that do not appear in the final equations are not necessarily unimportant in predicting recidivism; rather, other variables produced a better fit.

Exhibits B1 through B8 show the multivariate analysis results for the graphs presented in the text.

Exhibit B1. Regression Results on the Probability of the Seriousness^a and Frequency of Rearrest for All Defendants: Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is a Teenager	2.0185	<.001
Current Case is Burglary	2.2243	<.001
Defendant is Black	1.5135	<.001
Current Case is Robbery	1.4625	<.001
Current Case is Larceny and Defendant Has Arrest Record	1.4831	<.001
Defendant is in His/Her Twenties	.8170	<.001
Defendant is Male	1.0489	<.001
Number of Arrests in Past 2 Years	.6516	<.001
Number of Previous Arrests	.0559	<.001
Defendant is Employed	-.5927	<.001
Defendant Uses Drugs	.6358	<.001
Defendant Has an Alias	1.0507	<.001
Arrested for a Drug Offense in Past 2 Years	-.8940	<.01
Current Case if for a Consensual Sex Offense	1.1068	<.01
Defendant Has an Arrest Record	.5036	<.01
Current Case is a Drug Offense and Defendant Has an Arrest Record	.8595	<.01
Current Case is a Drug Offense and Defendant Does Not Have an Arrest Record	-.7253	<.01
Arrested in Past 2 Years for Burglary	.7867	<.05
Arrested in Past 2 Years	.6086	<.05
Current Case is an Assault	.3943	<.05
Number of Convictions in Past 2 Years	.4326	<.05

Notes:

N = 4,703

Intercept = -8.5413

Multiple R² = .209

^aSeriousness measured by the maximum sentence which could be given for the most serious police charge in the case.

Exhibit B2, Regression Results on the Probability of the Seriousness^a and Frequency of Rearrest for All Defendants: Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is a Teenager	1.8034	<.001
Defendant is Black	1.3246	<.001
Current Case is Burglary	1.8937	<.001
Defendant is Male	1.1759	<.001
Current Case is a Larceny and Defendant Has an Arrest Record	1.4795	<.001
Number of Arrests in Past 2 Years	.6569	<.001
Current Case is Robbery	1.2454	<.001
Defendant is in His/Her Twenties	.7588	<.001
Defendant is Employed	-.5990	<.001
Arrested for a Drug Offense in Past 2 Years	-1.1979	<.001
Number of Previous Arrests	.0478	<.001
Current Case is a Drug Offense and Defendant Does Not Have an Arrest Record	-.8874	<.001
Current Case is an Assault	.4349	<.01
Defendant Uses an Alias	.8079	<.01
Defendant Uses Drugs	.4659	<.01
Arrested in Past 2 Years	.5807	<.05
Defendant Arrested for Burglary in Past 2 Years	.6909	<.05
Defendant Has an Arrest Record	.3850	<.05

Notes:

N = 4,703
 Intercept = -8.6507
 Multiple R² = .181

^a Seriousness measured by the Sellin-Wolfgang Index.

Exhibit B3. Regression Results on the Probability of the Seriousness^a
and Frequency of Repapered Cases After a Papered Case:
Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is a Teenager	2.2967	≤ .001
Defendant is Black	1.5454	< .001
Current Case is a Burglary	1.8442	< .001
Defendant is in His/Her Twenties	.9735	< .001
Number of Prior Arrests	.0750	< .001
Number of Arrests in Past 2 Years	.6736	< .001
Current Case is a Larceny and Defendant Has an Arrest Record	1.9848	< .001
Current Case is a Robbery	1.2469	< .001
Defendant is Male	1.0931	< .001
Defendant is Employed	-.6385	< .001
Current Case is a Drug Offense and Defendant Has No Arrest Record	-1.4231	< .001
Defendant Has an Alias	1.0946	< .001
Defendant Uses Drugs	.7054	< .001
Arrested in Past 2 Years	.7938	< .001
Arrested for Drugs in Past 2 Years	-.9333	< .01
Current Case is a Larceny	-.6944	< .01
Current Case is a Drug Offense and Defendant Has an Arrest Record	.7651	< .05
Current Case is a Consensual Sex Offense	.8591	< .05

Notes:

N = 3,543
Intercept = -8.5487
Multiple R² = .209

^a Seriousness measured by the maximum sentence which could be given on the most serious police charge in the case.

Exhibit B4. Regression Results on the Probability of the Seriousness^a
and Frequency of Repapered Cases After a Papered Case:
Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is a Teenager	2.0292	<.001
Current Case is a Burglary	1.8909	<.001
Defendant is a Male	1.2960	<.001
Current Case is a Larceny and Defendant Has an Arrest Record	1.5918	<.001
Defendant is Black	1.3149	<.001
Defendant is in His/Her Twenties	.9198	<.001
Current Case is a Robbery	1.2985	<.001
Number of Previous Arrests	.0677	<.001
Number of Arrests in Past 2 Years	.5576	<.001
Arrested for Drug Offense in Past 2 Years	-1.4744	<.001
Defendant is Employed	- .5601	<.001
Current Case is a Drug Offense and Defendant Does Not Have an Arrest Record	-1.1274	<.001
Arrested in Past 2 Years	.7677	<.001
Defendant Uses Drugs	.5566	<.01
Defendant Has Alias	.8871	<.01
Current Case is an Assault	.4959	<.01

Notes:

N = 3,543
Intercept = -9.0171
Multiple R² = .186

^a Seriousness Measured by the Sellin-Wolfgang Index.

Exhibit B5. Regression Results on the Probability of the Seriousness and Frequency of Reconviction after a Conviction: Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is a Teenager	1.9205	<.001
Number of Previous Arrests	.0906	<.001
Number of Convictions in Past 2 Years	.9470	<.001
Defendant is in His/Her Twenties	.9118	<.001
Current Case is Robbery	1.0908	<.001
Defendant is Black	1.1250	<.001
Arrested in Past 5 Years	.7247	<.01
Current Case is a Larceny and Defendant Has an Arrest Record	.9930	<.01
Current Case is Burglary	1.1034	<.01
Defendant and Victim are Not Strangers	-.7236	<.05
Current Case is Assault	.6316	<.05

Notes:

N = 1,366

Intercept = -8.5937

Multiple R² = .138

^a Seriousness measured by the maximum sentence which could be given for the most serious police charge in the case.

Exhibit B6. Regression Results on the Probability of the Seriousness^a and Frequency of Rearrests after a Felony: Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Number of Arrests in Past 2 Years	.9359	≤.001
Current Case is a Burglary	2.1274	<.001
Defendant is a Teenager	1.5916	<.001
Current Case is a Robbery	1.2354	<.001
Defendant is Black	1.5782	<.001
Defendant is Male	1.2438	<.001
Number of Prior Arrests	.0611	<.01
Defendant is Not Employed	.6040	<.01
Defendant is Age 40 or Older	- .8143	<.01
Defendant Uses an Alias	1.3816	<.01
Defendant has Drug Arrest in Past 2 Years	-1.2037	≤.01
Number of Arrests for Crimes Against Persons	.0274	<.05
Defendant Uses Drugs	.7312	<.05
Arrested in Past 5 Years	.4855	<.06

Notes:

N = 1,957

Intercept = -8.3214

Multiple R² = .169

^a Seriousness measured by the maximum sentence which could be given for the most serious police charge in the case.

Exhibit B7. Regression Results on the Probability of the Seriousness^a and Frequency of Rearrests after a Misdemeanor: Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is Black	1.5455	<.001
Defendant is a Teenager	1.6978	<.001
Arrested in Past 5 Years	1.3255	<.001
Number of Arrests in Past 2 Years	.5708	<.001
Arrested in Past 2 Years for Burglary	1.7434	<.001
Defendant is Male	.9599	<.001
Defendant is in Twenties	.7445	<.001
Current Case is An Assault	.9975	<.001
Current Case is an Attempted Burglary or Unlawful Entry	1.2547	<.001
Defendant is Employed	- .5728	<.001
Current Case is a Consensual Sex Offense	1.2924	<.001
Number of Previous Arrests	.0460	<.001
Defendant Uses Drugs	.7062	<.001
Current Case is Larceny and Defendant Has Arrest Record	.8777	<.05
Arrested in Past 2 Years for Larceny	.7027	<.05
Number of Convictions in Past 2 Years	.5061	<.05
Victim and Defendant are Not Strangers	- .6050	<.05
Current Case is a Larceny	.5262	<.05
Defendant is on Probation or Parole	.6728	<.06

Notes:

N = 2,746
 Intercept = -8.8026
 Multiple R² = .240

^a Seriousness measured by the maximum sentence which could be given for the most serious police charge in the case.

Exhibit RR. Regression Results on the Probability of the Seriousness^a and Frequency of Rearrests after a Misdemeanor. Superior Court, Washington, D.C.

Independent Variables	Estimated B	Significance Level
Defendant is Black	1.2352	<.001
Number of Arrests in Past 2 Years	.5487	<.001
Arrested in Past 2 Years for Burglary	1.9547	<.001
Arrested in Past 5 Years	.9779	<.001
Defendant is a Teenager	1.0496	<.001
Defendant is Male	.9038	<.001
Current Case is Attempted Burglary or Unlawful Entry	1.2186	<.001
Current Case is an Assault	.8535	<.001
Defendant is Employed	-.5917	<.001
Arrested in Past 2 Years for Larceny	1.0074	<.001
Number of Previous Arrests	.0389	<.01
Current Case a Larceny and Defendant has an Arrest Record	1.0120	<.01
Defendant on Probation or Parole	.8418	<.05
Current Case a Larceny	.5390	<.05
Defendant Uses Drugs	.4154	<.05

Notes:

N = 2,746

Intercept = -8.3313

Multiple R² = .204

^a Seriousness measured by the Sellin-Wolfgang Index.

APPENDIX C

ADDITIONAL TABLES

The following bivariate tables may be of interest to persons who would like a tabular presentation of some of the regression results.

Table C1. Percentage of Defendants with Arrest Records
by Type of Crime: Washington, D.C.

Type of Crime for Which Defendant Arrested in Panel Case	Number of Panel Cases	Arrest Record of Defendant	
		Percentage With At Least One Previous Arrest	Percentage With At Least One Previous Arrest For a Violent Crime
Violent:			
Homicide	91	73%*	51%*
Assault	918	52%	34%*
Sexual Assault	136	60%*	34%*
Robbery	498	66%*	42%*
Property:			
Burglary or Unlawful Entry	421	62%*	34%*
Larceny	849	49%	25%
Fraud	157	53%	23%
Arson or Property Destruction	79	47%	25%
Victimless:			
Weapons Offense, Gun	331	57%*	34%*
Weapons Offense, Other	73	53%	29%
Gambling	144	49%	21%
Consensual Sex	164	63%*	24%
Drugs	647	41%	18%
Bail Violations	137	91%*	47%*
Other	58	59%*	28%
All Defendants in Panel	4,703	55%	30%

Source: Prosecutor's Management Information System (PROMIS).

*Percentage higher than that for all defendants in the panel.

Table C2. Percentage of Defendants Arrested After Panel Case
According to Arrest Record and Type of Crime: Washington, D.C.

Type of Crime for Which Defendant Arrested in Panel Case	Percentage of Defendants Rearrested After Panel Case		
	Total	Defendants Without Arrest Record	Defendants With Arrest Record
Violent:			
Homicide	26% (91)**	20% (5)	29% (66)
Assault	34% (918)	24% (443)	43% (475)
Sexual Assault	35% (136)	*26% (54)	40% (82)
Robbery	*51% (498)	*44% (171)	*55% (327)
Property:			
Burglary or Unlawful Entry	*56% (421)	*42% (158)	*64% (263)
Larceny	*42% (849)	24% (429)	*60% (420)
Fraud	29% (157)	22% (74)	36% (83)
Arson or Property Destruction	33% (79)	21% (42)	46% (37)
Victimless:			
Weapons Offense, Gun	28% (331)	20% (142)	34% (189)
Weapons Offense, Other	33% (73)	18% (34)	46% (39)
Gambling	19% (144)	10% (73)	28% (71)
Consensual Sex	*52% (164)	*33% (60)	*63% (104)
Drugs	34% (647)	19% (380)	*56% (267)
Bail Violations	*50% (138)	*33% (12)	*52% (125)
Other	25% (58)	17% (24)	32% (34)
All Defendants in Panel	39% (4703)	25% (2121)	50% (2582)

Source: Prosecutor's Management Information System (PROMIS)

*Percentage higher than that for all defendants in column.

**Base N is all defendants arrested in panel case.

END