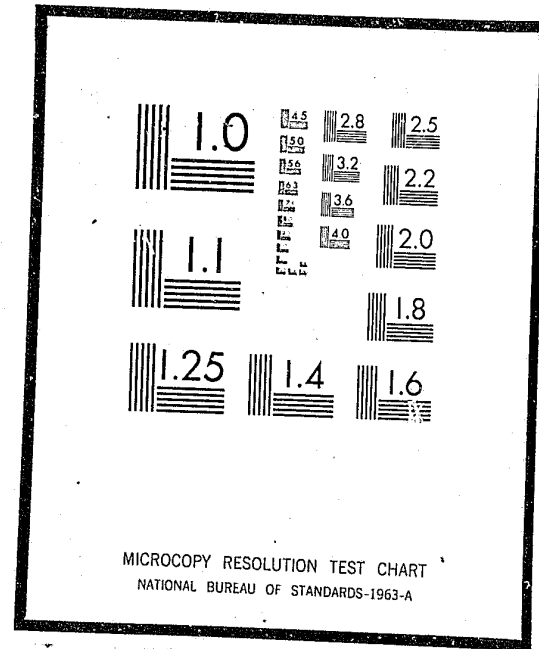


# NCJRS

IIB2.4

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U.S. Department of Justice.

U.S. DEPARTMENT OF JUSTICE  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE  
WASHINGTON, D.C. 20531

Date filmed

4/14/76

PREDICTING RECIDIVISM WITH PROMIS DATA --  
PRELIMINARY RESULTS FROM  
AN ANALYSIS OF DEFENDANTS IN 1973

Kristen M. Williams

August 1, 1975

*Final Report*

31752 C.2  
READING ROOM

This project was supported by Grant No. 74-NI-99-0008 awarded by the Law Enforcement Assistance Administration, U.S. Department of Justice, under the Omnibus Crime Control and Safe Streets Act of 1968, as amended. Points of view or opinions stated in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice. This report is one of a series of descriptive statistics reports prepared at the end of the first year of the PROMIS Research Project. For a description of that Project, including its structure, data sources and data limitations, the reader is referred to "First Year Research Designs, PROMIS Research Project," Institute for Law and Social Research, Washington, D.C., December 1975.



THE INSTITUTE FOR LAW AND SOCIAL RESEARCH  
Washington, D. C.

## Executive Summary

Research concerning the prediction of future recidivism for defendants arrested for street crimes is being conducted based on data contained in the Prosecutor's Management Information System (PROMIS) in the U.S. Attorney's Office of the Superior Court in Washington, D.C. This research is part of a study of patterns of criminal and related community behavior that will span several years. The purpose of the analysis is to identify the defendants most likely to recidivate when they first enter the criminal justice system and to evaluate decisions made by the police, prosecutor, defense counsel and judge during the processing of a case, in terms of their effects on the probability, frequency, and seriousness of recidivism. An evaluation of correctional alternatives in relation to recidivism will also be undertaken beginning in the second year. For the first year's analysis of recidivism, one year of data was studied, consisting of all cases screened for prosecution during 1973. The purpose of this preliminary analysis was to develop the methodology for the longer panel analysis. Findings are only suggestive of what may be found when the panel is followed for several years. There were 15,460 cases brought to the prosecutor in 1973, involving 12,382 defendants.

Several definitions of recidivism were used in the study. Both the frequency and the seriousness of recidivistic events were considered, as well as how far a defendant's case moved into the criminal justice system before the defendant was considered a recidivist. One of the purposes of using several measures was to see if results differed depending upon the measure used. In general, the results were similar for measures

of the frequency of recidivistic acts, but not for seriousness. The five measures of recidivism within 1973 were: number of arrests in 1973, number of cases prosecuted in 1973, number of cases resulting in conviction in 1973, whether a defendant was rearrested within six months, and the seriousness of the defendant's second case if he was rearrested within six months.

Not all of the independent variables which will eventually be included in the recidivism analysis were available for 1973. In particular, the sentence imposed by the judge was unavailable, as well as any information concerning persons entering the correctional system. Some information was available on the personal characteristics of the defendant, his or her criminal history, characteristics of the current case, and actions taken by the police, prosecutor, defense counsel and judge during case processing.

The data were first subjected to simple analyses, relating one variable to another without taking account of other factors. One finding from this preliminary analysis was that defendants who pled to their first case in 1973 were more likely to be rearrested within 1973 compared to defendants who had any other type of final disposition in their first case. Another finding was that those found not guilty by a judge or jury were as likely to be rearrested as those found guilty. When the definition of recidivism was reprosecution, those found not guilty in their first case in 1973 were the group most likely to be reprosecuted within 1973. This could be because they had more opportunity to commit a crime and subsequently be caught, since they were not incarcerated, but it raised questions about the defendants found not guilty.

The data were then subjected to a method of statistical analysis that considers the combined effects of many variables. Multiple regression analysis was used with each of the five measures of recidivism developed. Regression analysis allows the effect of each of the independent variables to be measured while controlling for other variables.

One of the primary findings of this analysis was that personal characteristics of the defendant and characteristics of his criminal history were more important determinants of recidivism than actions taken by the criminal justice system during case processing which were available for analysis. Personal characteristics of the defendant were important in determining both the frequency and seriousness of future criminal acts. Race, age, sex, employment status, alcohol abuse and opiate use were all statistically significant in several of the analyses, although the fact that a defendant was male was the only personal characteristic which predicted both frequency and seriousness. Use of opiates, race and employment status were found to be significant in almost every analysis of the frequency of recidivism. Whether personal characteristics should be used in predicting recidivism and later considered in policy decisions is a difficult question since the goal of evenhandedness of treatment may conflict in this case with the goal of reducing recidivism.

The six items available on a defendant's criminal history all turned out to be statistically significant. The number of previous arrests was the most consistent predictor of the frequency of recidivism, with an item on whether the defendant was arrested in the past five years and an item on the time since most recent arrest appearing as significant with slightly less consistency over the various measures. Past criminal history seems

to be a good predictor of future criminal activity. Further data on the types of previous crimes, past convictions, and periods of incarceration would probably increase the predictive power based on past criminal history.

There were two clusters or types of crimes committed by persons who later recidivated within 1973--one more serious than the other. Consensual sex offenders, mostly prostitutes, were likely to be rearrested, re-prosecuted and reconvicted. The other more serious group was composed of persons committing property crimes. Personal robberies, residential burglaries, and business larcenies were the types of crimes committed by persons likely to reenter the criminal justice system within a year. These crime categories comprised a large proportion of the cases brought against defendants during 1973. Out of 15,460 cases, there were 1,440 arrests for personal robbery, 1,174 arrests for residential burglary, and 1,059 arrests for business larceny. Persons committing such crimes are a possible target group for application of more of the prosecutor's resources.

As far as the effects of actions taken by the criminal justice system the findings of the 1973 analysis may have policy implications, if confirmed by future research.

Persons whose cases are assigned to the Major Violators Unit for serious misdemeanants are more likely to recidivate. Further analysis is needed to find out when the recidivistic event is taking place. If it occurs before the final disposition of the first case, perhaps more emphasis should be placed on detaining such persons. If they are rearrested after conviction, a look at sentencing is in order. If they are rearrested because they were not convicted, perhaps there is a need to improve procedures in the Major Violators Unit.

Two diversion programs for first offenders, Project Crossroads and First Offender Treatment, appear to be having the effect of reducing recidivism. Diversion appears to be a viable alternative for some defendants. Further research can identify which persons are likely to be successful in the programs.

The time between arrest and final disposition seemed to be an important determinant of recidivism. Detention of persons most likely to recidivate and an added emphasis on speedy trial for these defendants would seem appropriate.

No actions taken during case processing appeared to affect the seriousness of the recidivistic act. A personal characteristic, whether the defendant was male, increased the probability that the recidivistic crime would be serious. The other factors found to be significant concerned the previous offense. The seriousness of the previous offense, whether it was a felony, and whether the crime charged was a business robbery, all increased the likelihood that the subsequent crime would be more serious. Perhaps a two-step process for identifying recidivists, with respect to frequency and seriousness, would be most effective. For lesser crimes, actions could be taken to reduce frequency. For those defendants identified as likely to reenter the criminal justice system and commit serious crimes, the emphasis could be on removing their opportunity for recidivism.

These findings are tentative since they are based on limited information from a study of recidivism within only one year. They are suggestive, however, of what future analyses may show. In the second and third year of the study, the panel of defendants will be followed for a longer period and additional variables will be obtained.

PREDICTING RECIDIVISM WITH PROMIS DATA --  
PRELIMINARY RESULTS FROM  
AN ANALYSIS OF DEFENDANTS IN 1973

Introduction

One method of trying to reduce the crime rate is to concentrate more resources on attempting to reduce repetitions in criminal behavior. If one examines the cases prosecuted during 1973, one can see that first offenders at the time of their first case in 1973 accounted for less than their share of the cases prosecuted during the year, and that persons with previous arrests accounted for more than their share:

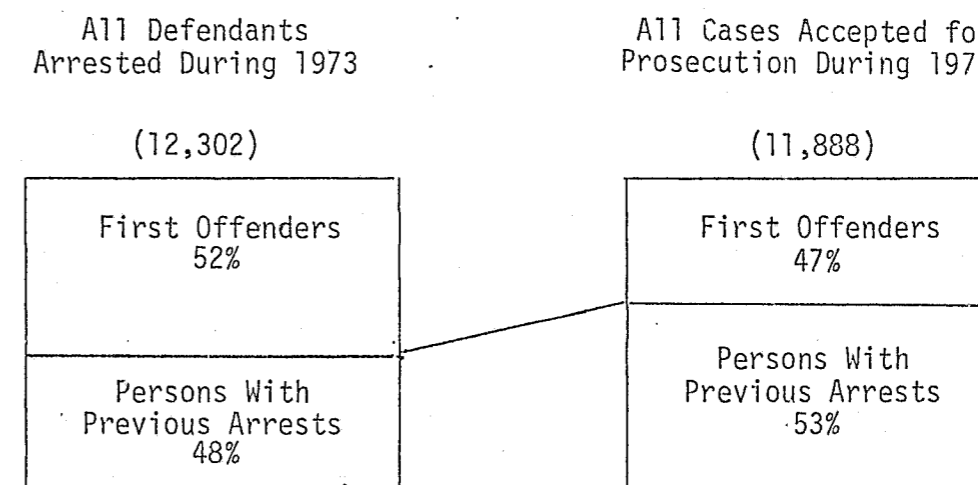


Figure 1.  
Comparison of Arrests and Prosecutions, First Offenders  
Versus Persons With Prior Arrests

An effort to identify which persons are most likely to recidivate, whether first offenders or persons who have already had contact with the criminal justice system, would allow better utilization of resources and perhaps a reduction in the overall crime rate.

As part of the PROMIS research project using the data available from the U. S. Attorney's Office of the Superior Court in the District of Columbia, a panel study of recidivism will be conducted. There are three major research questions to be addressed in the analysis:

(1) When a defendant's case is screened for prosecution what is the best prediction that can be made concerning the probable frequency and seriousness of future criminal behavior?

(2) How do the actions of the police, the prosecution, defense counsel and judge during the processing of a case affect recidivism, controlling for the personal characteristics of the defendant and the defendant's criminal history?

(3) For persons sentenced to a period of incarceration, how do their experiences within the corrections system affect recidivism, controlling for personal characteristics, characteristics of the defendant's criminal history and the actions taken during the processing of a case?

Although the recidivism study will follow a panel group of defendants for several years, the first two questions can be addressed by looking at recidivism within one year. The preliminary findings from looking at persons who had more than one case just within 1973 will be reported in this paper. The findings are tentative since a year does not give sufficient time to see whether persons will eventually be re-arrested. One year was analyzed to develop the methodology to be used in the future and to suggest hypothesis to be tested in the longer panel analyses.

To structure the analysis a model of recidivism was developed. The

model has as its dependent variable the probability of recidivism. Various definitions of recidivism will be discussed in the next section. Seven independent factors were hypothesized as influencing recidivism: the personal characteristics of the defendant; his previous criminal history; actions taken by the police, prosecutor, defense counsel and judge during the criminal court process; and finally, the defendant's experience within the corrections system. A description of this model and the research design for the panel study can be found in the paper, Predicting Recidivism with PROMIS data - Research Design. Detailed exposition of the design will not be repeated in this paper. Instead, the concept and measurement of the dependent and independent variables for 1973 will be discussed, and then the preliminary results of the first year's analysis will be summarized.

#### Dependent Variables - Measures of Recidivism Within 1973

The measures of recidivism developed for the analysis of 1973 data were necessarily more limited than those which can be developed when more data is available. However, the approach for measuring recidivism was the same.

There are three problems in defining the dependent variable of recidivism in this analysis: what event is to be considered a "failure" -- a rearrest, a reprosecution<sup>1</sup> or a reconviction; how can the seriousness of the recidivistic event be taken into account; and how can the frequency of recidivistic events be accounted for?

---

<sup>1</sup> In this paper, the term "reprosecution" refers to defendants who were arrested and subsequently had charges filed by the prosecutor more than once during 1973.

Defining how far a defendant must move into the criminal justice system before being considered a recidivist is important. 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. Since PROMIS contains data on each of three definitions of recidivism--rearrest, re prosecution and reconviction--all three were tested in the analysis for 1973.

The second consideration of the seriousness of the recidivistic event was resolved by using as a dependent variable the seriousness score of the second case (which was considered the recidivistic event) on the Sellin-Wolfgang Score.<sup>2</sup> Only those who were rearrested in 1973 were included in this part of the analysis.

The third consideration of the time between recidivistic events was resolved by giving each defendant a fixed period of time to be rearrested after the date of the screening of his first offense in 1973. Not all defendants had an equal opportunity due to the lack of information on incarceration available for 1973.

These considerations resulted in five measures of recidivism during 1973:

- (1) Number of cases brought by the police during 1973.
- (2) Number of cases prosecuted during 1973, given that the first case was prosecuted.

---

<sup>2</sup> The Sellin-Wolfgang Score was developed from asking citizens and criminal justice practitioners to rate various crimes and then isolating the elements of the offense associated with higher ratings; see Thorsten Sellin and Marvin Wolfgang, The Measurement of Delinquency (New York: Wiley, 1964).

(3) Number of cases for which a conviction was obtained during 1973, given that the first case resulted in conviction.

(4) Whether the defendant was rearrested within six months. A defendant with a case during 1973 was given six months from the date his or her first case was screened for prosecution to be rearrested. If a person was rearrested within six months, he or she was considered a recidivist and was given another six months from the date of the screening of the second offense to commit another crime. Whenever a defendant no longer had a six-month period from the date of the screening of an offense to be rearrested, he or she was no longer included in the analysis.

(5) Seriousness of the second case. For those defendants who were rearrested using the measure developed in (4) above, there was a separate analysis to determine the variables which best explained the seriousness of the second case. The dependent variable was the Sellin-Wolfgang Score of the second case.

#### Independent Variables Available for 1973 - Hypotheses

Not all of the independent variables which will eventually be included in the recidivism model were available for 1973. In particular, the sentence imposed by the judge was unavailable, as well as any information concerning persons entering the corrections system. Despite these gaps, there were some variables available for each of the categories described in the model, except for the defendant's experience within the correctional system.

Some of the hypotheses to be tested on 1973 data are based on the findings of earlier research and others have not previously been tested.

The items in the Base Expectancy Scale (which is currently internally computed in PROMIS as a measure of the seriousness of the defendant) were hypothesized to have the same relationship to recidivism as when the score was originally developed from a study of parolees in California. Since arrested persons differ from parolees, the weights of the items in the scale might change, even if the direction of the relationship to recidivism remains the same.

Two general hypotheses to be tested in regard to the effect of any actions taken by the criminal justice system are: the further a person moves into the criminal justice system the more likely he will be to reenter again later, and inefficiency in the handling of a defendant's case, as measured by time delays and continuances, will increase the likelihood of recidivism. The hypothesized direction of the relationship between each of the independent variables and recidivism are shown next to each variable below for which a relationship is hypothesized.

<u>Independent Variable</u>	<u>Hypothesized Direction of Relationship to Recidivism</u>
I. Personal Characteristics of the Defendant	
Age	-
Race (Black)	+
Sex (Male)	+
*Defendant employed at time of arrest	-
*Last job held for less than six months	+
*History of chronic alcohol abuse	+

\*Items in present Base Expectancy Scale.

*History of opiate use	+
Physical disability or bad health	-
II. Characteristics of the Defendants' Criminal History	
*Arrested in five years previous to current case	+
*Defendant has used an alias	+
*Number of previous arrests for crimes against persons	+
*First arrest for auto theft	+
Time since most recent arrest	-
Characteristics of the current case	
Type of case:	
Robbery, burglary, auto theft, consensual sex offenses	+
Homicide, assault, forcible sex offenses	-
Victim-defendant relationship	
Felony/misdemeanor	
Case seriousness (Sellin-Wolfgang Index)	
Number of codefendants	
Number of witnesses	
III. Actions Taken by the Police	
Time between the offense and arrest	
IV. Actions Taken by the Prosecutor	
Case papered	
Case specially assigned to Major Violators Unit	
Case nollied	
Successful in diversion program	

\*Items in present Base Expectancy Scale.

Acceptance of plea bargain

Number of continuances

Time between arrest and final disposition

V. Actions Taken by Defense Counsel

Defense counsel a Public Defender

Number of continuances

Time between arrest and final disposition

VI. Actions Taken by the Judge

Bail decision

Dismissal of case

Finding of guilty

Single-variable and Two-variable description of Recidivism during 1973.

Before conducting the analysis of recidivism using multiple regression, in order to control for the effect of many variables simultaneously, some simple frequency distributions were tabulated. The purpose of computing these simple statistics was to understand how the dependent variables were distributed, and how they were related to some of the independent variables hypothesized to be important. In these tables only the relationship between two variables is examined at one time. First, three measures of recidivism within 1973--number of cases brought by the police, number of cases prosecuted, and number of cases in which a conviction was obtained--will be presented, followed by a discussion of the cross-tabulation of those variables with several other variables.

During 1973, 12,382 defendants were arrested at least once. Of these, 2,065--or 16.7 percent--were arrested more than once, yielding a total of 15,460 cases brought against individuals during the year (Table 1). Although approximately 12 percent of all the defendants who were arrested in 1973 had only two cases during the year, there were 5 percent who had 3 or more cases, and 3 individuals who had 9, 10 and 11 cases. When using frequency of arrests as the criterion for recidivism, a dependent variable with values ranging from 1 to 11 can be constructed.

Since arrests are cases which have not yet been screened for prosecution rearrests are not always considered an appropriate measure of recidivism. Another way of defining recidivism is reprosecution. In Table 2, the frequency distribution of defendants is shown by the number of cases that were prosecuted against each defendant in 1973. Twenty-two percent of the defendants arrested did not have even one case prosecuted in 1973, 66 percent had 1 case, and 12 percent had more than one case. Thus, the 1,529 defendants who had more than one prosecution comprised 16 percent of the defendants who had at least one case prosecuted during the year. The largest number of cases prosecuted for any one defendant during 1973 was nine.

An even stricter definition of recidivism is reconviction. From Table 3, one can see that two thirds of the defendants in 1973 did not have even one case which resulted in conviction. Of the one-third, or 4,017 defendants, who had one case result in a conviction, 386 or 10 percent, had more than one case result in conviction.



Table 1. Percent Distribution of Defendants by Number of Cases Brought by the Police During 1973

Number of Cases Brought by the Police During 1973	Number of Defendants	Percent
1 Case	10,317	83.3%
2 Cases	1,454	11.7
3 Cases	373	3.0
4 Cases	140	1.1
5 Cases	63	0.5
6 Cases	19	0.2
7 Cases	7	0.1
8 Cases	6	0.0
9 Cases	1	0.0
10 Cases	1	0.0
11 Cases	1	0.0
All defendants	12,382	100.0%

Table 2. Percent Distribution of Defendants by Number of Cases Prosecuted During 1973

Number of Cases Prosecuted During 1973	Number of Defendants	Percent
0 Cases	2,669	21.6%
1 Case	8,184	66.1
2 Cases	1,106	8.9
3 Cases	276	2.2
4 Cases	90	0.7
5 Cases	45	0.4
6 Cases	7	0.1
7 Cases	4	0.0
8 Cases	0	0.0
9 Cases	1	0.0
All defendants	12,382	100.0%

Table 3. Percent Distribution of Defendants by Number of Cases Resulting in Conviction During 1973

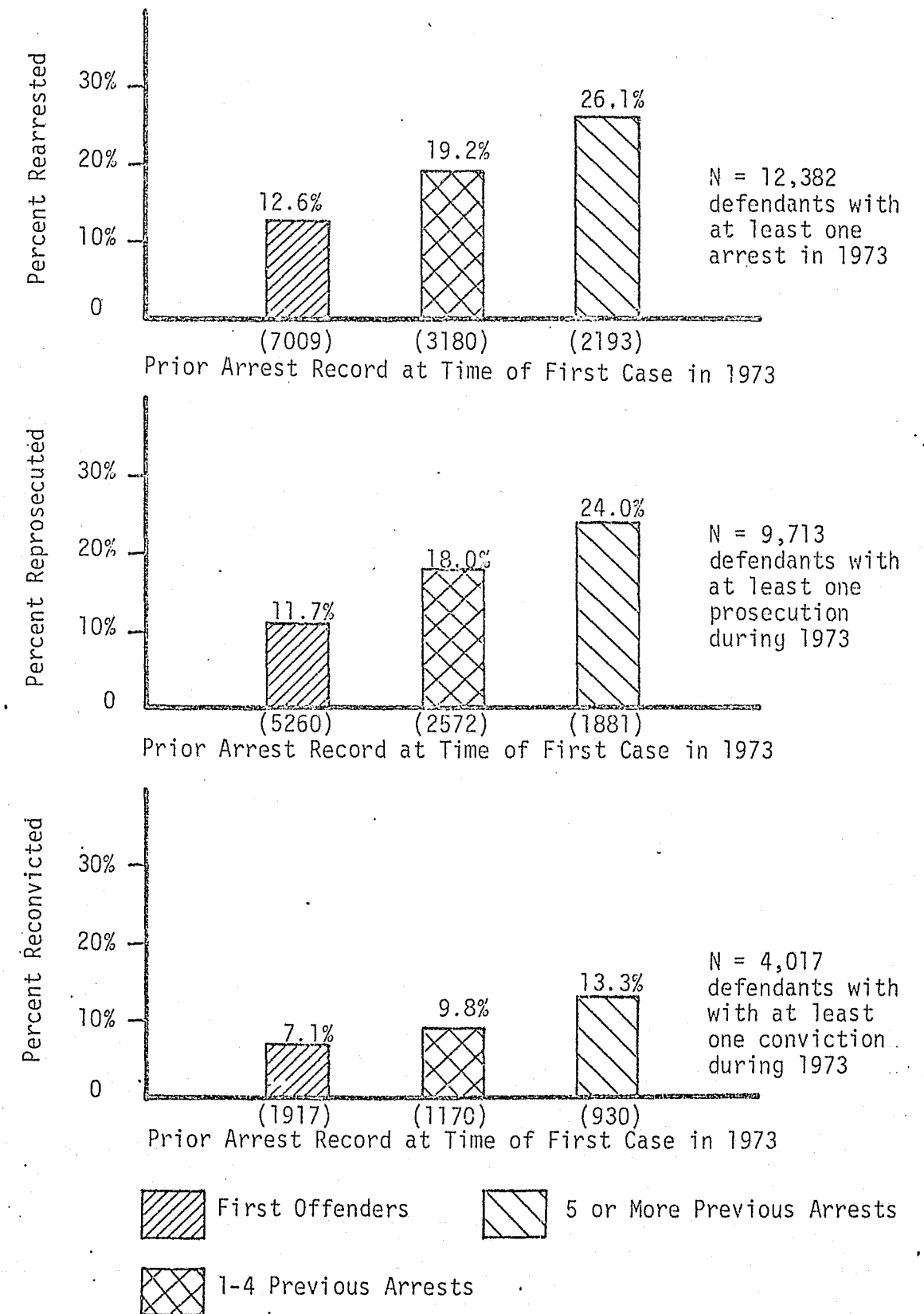
Number of Cases Resulting in Conviction During 1973	Number of Defendants	Percent
0 Cases	8,365	67.6%
1 Case	3,631	29.3
2 Cases	325	2.4
3 Cases	51	0.4
4 Cases	7	0.1
5 Cases	2	0.0
6 Cases	1	0.0
All defendants	12,382	100.0%

One of the reasons for looking at each of these three different measures, was to see if the persons defined as recidivists by each of the three measures had different characteristics. Similar relationships were found between each of the three measures of recidivism and prior arrest history and type of first case in 1973.

Figure 2, which follows, shows the percent of defendants rearrested, reprosecuted and reconvicted in 1973, according to the arrest record of the defendant at the time of his first case in 1973. The percentages in the three different charts shown on the same page vary by the definition or measure of recidivism used, with defendants being rearrested and reprosecuted at a higher rate than being reconvicted. This may be partially due to the restricted time period under observation (persons convicted in their first case in 1973 do not have time to be convicted a second time), and partially due to the fact that the probability of arrest is greater than the probability of reprosecution or reconviction. Nevertheless, the relationship between previous arrest history and recidivism is consistent for each of the three tables: the more prior arrests a person had at the beginning of 1973, the more likely he was to be a recidivist during the year. Although the magnitude of the relationship for the three measures varied, in the multivariate analysis discussed in the next section, prior arrest record continued to have a positive effect on recidivism, even when other factors were controlled, for each of the three definitions.

Another issue is whether the types of crimes committed by recidivists within 1973 vary according to the definition of recidivism.

Figure 2. Percent of Defendants Recidivating During 1973, by Arrest Record at the Time of the Defendant's First Case in 1973



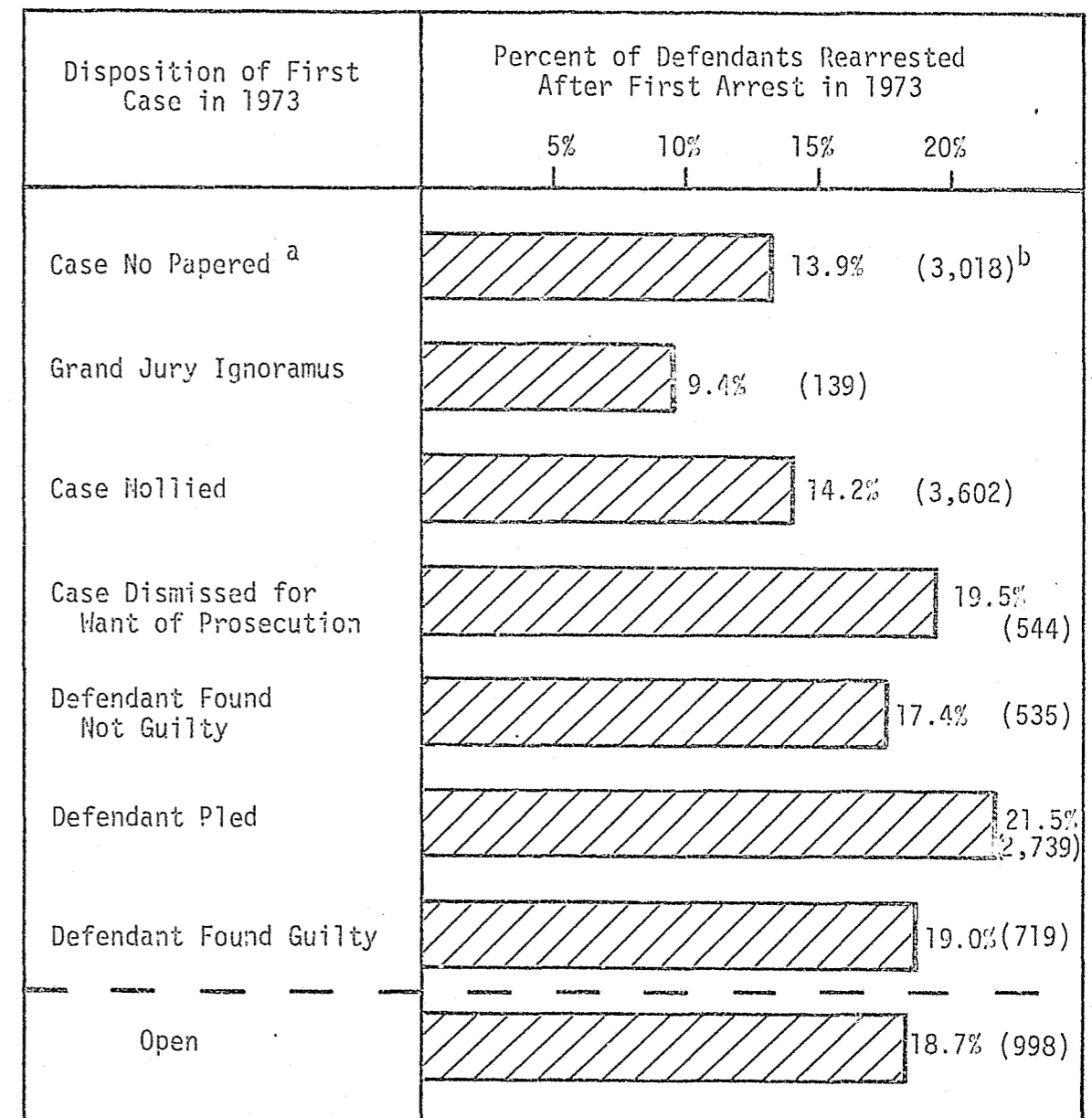
To address this question, the type of the first case in 1973 was tabulated against the number of rearrests, reprosecutions, and reconvictions a person subsequently had in 1973. The results for each definition of recidivism were very similar, with only a few minor exceptions. The crimes which appeared to be associated with recidivism for all three definitions before controlling for other factors were:

- Personal Robbery
- Personal Larceny
- Residential Burglary
- Business Robbery
- Consensual Sex Offenses
- Bail Violations and Prison Breach

After other factors were controlled for in the multivariate analysis, each of these crimes, with the exception of bail violations, were important predictors of either the frequency or seriousness of subsequent crimes.

One of the main objectives of the research on recidivism is to ascertain whether any actions taken by the criminal justice system have positive effects on defendants in terms of reducing their future recidivism. The final disposition of the first case in 1973 was one of the important independent variables available in this analysis. Figure 3 shows the percent of defendants who recidivated, defined in this instance as a rearrest, depending upon the final disposition of their first case in 1973. The table seems to support the hypothesis that the further a defendant moves into the criminal justice system, the more likely he or she will be to recidivate. The results from the multivariate analysis

Figure 3. Percent of Defendants Rearrested in 1973 by Disposition of Their First Case



<sup>a</sup> Case not accepted for prosecution.

<sup>b</sup> Figures in parenthesis indicate base number of first cases having each type of final disposition.

in the next section give this table a different interpretation: the persons who the criminal justice system is more likely to prosecute and convict are those who are most likely to be charged with another crime. Only 14 percent of the persons who have their cases no papered or nollied are rearrested, whereas the percent rearrested is higher for defendants whose cases result in either a dismissal by the judge, a finding or verdict of not guilty, or a plea, finding, or verdict of guilty. The group most likely to be rearrested in 1973 were those who pled guilty to the first case. Within the year, 22 percent of these persons had one or more additional arrests. One explanation might be that persons who plea are career criminals who want to get the criminal justice process over with quickly, in order to get back out on the street. Another possibility is that persons who are rearrested plea to one case as part of a plea bargain in the other.

Another interesting feature of this table is that defendants who are found guilty differ only slightly from those found not guilty, in terms of recidivism. It would appear the "innocence" is not measured by a person being found not guilty, if one assumes that a group of "innocent" persons would not have a high rearrest rate. Further support is lent to this interpretation by the finding that the percent of persons re-prosecuted or reconvicted shows the same pattern as rearrest data for persons found not guilty in their first case. Specifically, the percent re-prosecuted in 1973 who were found not guilty by the jury in their first case was higher than the percent re-prosecuted after any other type of final disposition! Part of the explanation for this finding may be that

those found not guilty are "free", and therefore have the opportunity to be rearrested, since they are not incarcerated.

After examining the results from these and other bivariate tables, a multivariate analysis was conducted.

#### Multivariate Analysis of Different Measures of Recidivism Within 1973

The two questions which can be addressed by looking at recidivism just within 1973 are:

(1) What is the best prediction which can be made at the screening of a case as to the frequency and seriousness of a person's future recidivism, based on personal characteristics of the defendant, characteristics of the defendant's criminal history, and characteristics of his or her current case?

(2) What actions taken by the criminal justice system have an effect on the probability of recidivism, controlling for the factors in (1) above?

Since the objective in answering these questions is to obtain the best possible prediction using all of the available data, a multivariate analysis was appropriate. The first year's analysis included each of the five measures of recidivism within 1973 described earlier in this paper as dependent variables. In general, the results were similar for all of the measures of recidivism, except seriousness. As hypothesized, the direction of the relationship between the independent variables and the different measures of recidivism were the same, although the magnitude of the effects varied.

## Personal Characteristics of the Defendant and the Defendant's Criminal History--

The first question of the best possible prediction of recidivism at the time of screening was addressed using three measures of recidivism: the number of cases brought by the police in 1973, with the characteristics of the defendant at the time of the first case as the independent variables; whether or not the defendant recidivated within six months, based on his characteristics at the beginning of the six-month period; and the seriousness of the second case within six months for those who were rearrested, based on his characteristics at the beginning of the six-month period.

Beginning with the number of arrests in 1973 as the dependent variable, most of the personal characteristics of the defendant and his criminal history were found to have statistically significant, although small effects. Using 11,384 defendants, eight percent of variation in the number of cases in 1973 could be explained by variables available at the screening of the case. While this appears to be low, it should be remembered that an analysis of cases just within 1973 is going to define many persons as "nonrecidivists" who would reenter the criminal justice system given a longer follow-up period. Another problem is that the forms used in collecting data in 1973 were not always filled out properly. Still another, and a very significant problem is that incarceration data are not available. Persons detained pretrial or incarcerated posttrial do not have the same opportunity to recidivate as those not detained. Thus, it is expected that the effects of the independent variables are underestimated throughout this discussion.

All of the personal characteristics of the defendant had an effect on the number of arrests in 1973 at the two percent confidence level or less, except for two variables--whether the defendant's last job was held for six months and whether the defendant had a physical disability or bad health.<sup>3</sup> Younger persons, blacks, males, persons who were unemployed, persons with a history of opiate use and persons with a history of alcohol abuse were those more likely to have a high number of arrests in 1973.

Criminal history variables included in the analysis can be seen as basically two types--characteristics of the defendant's criminal history prior to the current case and characteristics of the current case. Of the six variables describing a person's criminal history, three were significant at the five percent level and three were not. Whether the defendant has used an alias, the number of previous arrests for crimes against persons, and whether the defendant's first arrest was for auto theft were not significant. Persons arrested in the past five years, persons with a higher number of previous arrests, and persons with a short period of time since the most recent arrest were more likely to be rearrested one or more times within 1973.

Looking at the variables which describe the case for which a defendant was arrested, significant relationships with recidivism were found

---

<sup>3</sup> The five percent level of confidence was arbitrarily chosen for use throughout this analysis. Only those relationships which were significant at least at the five percent level are reported. This means that if a large number of samples were drawn, and there were no relationship at all between the two variables, only five percent of the time the relationship would have a magnitude at least as large as it had in this sample.

for the type of case, its seriousness score, the number of codefendants and the relationship between the victim and the defendant. Whether the case was a felony or misdemeanor and the number of witnesses in the case did not show a significant relationship to recidivism.

There were two types of crimes committed by defendants who were rearrested in 1973. One group was consensual sex offenses, primarily prostitution. The other group was composed of serious property crimes, specifically personal robbery, residential burglary, business and personal larceny, and personal fraud. The group which had the largest impact in terms of explaining the variation in number of arrests within 1973 was prostitution. This is consistent with the finding that the seriousness of the crime had a negative effect on the probability of recidivism. Since sentencing data are not yet available, it may be that the explanation behind the negative relationship for seriousness is that persons who commit serious crimes are likely to be incarcerated. If this were the case, the magnitude of the effect of the serious property crimes on later recidivism would be underestimated. It is interesting to note that all of these crimes involve the acquisition of property. Prostitution is a way of making money, as is robbery, burglary and larceny. Each of these crimes had a lower proportion of employed defendants than the average for all defendants in 1973.

After controlling for other factors, the relationship between the victim and the defendant did not have the hypothesized impact on recidivism. It had been expected that the closer the relationship between the victim and the defendant, the less likely a defendant would be to recidivate. Looking only at the number of cases in 1973 in which there was a

victim, those committing crimes against friends were the least likely to recidivate, followed by those committing crimes against a family member, and finally, those committing crimes against strangers. After controlling for other factors, stranger crimes are least likely to result in recidivism, followed by crimes between friends, then families. This may be due to the fact that those arrested for stranger-to-stranger offenses may be convicted and incarcerated after their first case.

The relationships between the variables available at the screening of a case and recidivism measured as the number of arrests a defendant had in 1973 were similar to those found when the measure of recidivism within 1973 was whether a defendant recidivated within a six-month period. Ten percent of the variation in the dependent variable, "whether a defendant was rearrested within six months" was accounted for by the variables available at papering. This proportion was higher than when the measure of recidivism was the number of arrests within 1973. This proportion may be increased as a longer period than six months is available for analysis, and as data on sentencing and incarceration can be added to the analysis. The total number of six-month periods analyzed was 7,966. Persons who had more than one six-month period to be rearrested were counted more than once in the analysis.

Personal characteristics of the defendant had the same effect on recidivism when measured as a rearrest within six months. The young, blacks, males, the unemployed and persons who had used opiates were more likely to be rearrested in six months, holding all other factors constant. The only result differing from the analysis using the number of arrests

in 1973 as the dependent variable was that if a defendant was a chronic abuser of alcohol, this did not show a significant effect on rearrest within six months.

The effects of the criminal history variables, including characteristics of the current case, changed more than the effects of the personal characteristics when the measure of recidivism was rearrest in six months, rather than number of arrests in 1973. Five of the six previous criminal history variables had a significant effect on rearrest within six months. The item not having an effect was whether the defendant's first arrest was for auto theft. Whether the defendant had used an alias and the number of previous arrests for crimes against persons, each had a positive effect on rearrest within six months, although they did not have significant effects when the number of arrests in 1973 was the dependent variable.

None of the characteristics of the current case, except for the type of case, had a significant effect on recidivism within six months. The relationship between the victim and the defendant, the number of codefendants, whether the case was a felony, the seriousness of the crime, the number of witnesses, and the time between the offense and arrest all showed no significant impact.

The four types of crimes committed by persons who later were re-arrested, which were the same for both measures of recidivism, also had the largest effects: consensual sex offenses, personal robberies, residential burglaries and business larcenies. Whereas personal larceny and fraud had significant effects on the number of cases in 1973, they

were not significant in predicting recidivism within six months.

Robbery of a business, business property destruction and personal auto theft had an impact on recidivism within six months, but not on the number of arrests in 1973.

A separate analysis was made to determine whether the variables available at screening could be used also to predict the seriousness of the second case, if the defendant was rearrested. Thus, one could develop two groups to target on: those who are likely to recidivate, and those who are likely to be charged with a serious crime if they do recidivate. The number of observations was limited to the 1,529 cases in which a person was rearrested after six months. The proportion of the variation in the seriousness score accounted for by all the papering variables was 12 percent. This was largely due to the impact of only three variables--sex of the defendant, whether the crime was a felony, and the seriousness score of the previous case. The conclusion is uncomplicated: men who commit serious felonies are likely to commit another serious crime if they do recidivate.

#### Actions Taken During Case Processing--

The second question which can be addressed with 1973 data is: after controlling for these variables which are determined when a case comes in for screening, what effects do actions taken during the processing of a case have on recidivism? Five dependent variables were tested in examining this question for 1973: number of arrests during 1973, number of prosecuted cases during 1973, number of cases resulting in conviction during 1973, whether or not a defendant was rearrested within



six months, and the seriousness score of the second case if the defendant was rearrested.

There were differing numbers of observations for the three analyses of the number of cases in 1973, based on arrests, prosecutions and convictions, and the two analyses of recidivism within six months. For arrests, the number of defendants was 11,384. These were all defendants who had at least one case in 1973 and whose first case was closed. The mean number of arrests in 1973 was 1.2 and the proportion of variation accounted for by the independent variables was 10 percent. When number of cases prosecuted was used as the dependent variable, the observations were the 8,366 defendants whose first case was both papered in 1973 and closed as of 1975. In this regression, 11 percent of the variation was explained by all of the independent variables. When number of convictions in 1973 was used as the dependent variable, the amount of variation explained by the independent variables dropped to 7 percent. In this case, 3,457 observations were included in the analysis. To be included, a defendant's first case must have resulted in conviction. The analysis of whether a defendant was rearrested within six months was based on 7,447 cases in which a defendant had a six-month period to be rearrested and the first case was closed. The amount of variation explained by the independent variables was 12 percent. The final analysis was based on the 1,402 defendants who were rearrested within six months. Using the seriousness score of the second case on the Sellin-Wolfgang Score as the dependent variable, the independent variables accounted for 14 percent of the variation. This was a larger proportion than for any of the other regressions.

The effect on recidivism of the personal characteristics of the defendant and the characteristics of his criminal history remained largely the same after the additional variables describing actions taken in the defendant's first case in 1973 were added. Some variables, which were statistically significant when arrests in 1973 was used as the dependent variable, were not significant when papered cases in 1973 was the dependent variable. Finally, when number of cases resulting in conviction was the definition of recidivism, only seven variables were found to be significant. In no case, however, did the direction of any of the relationships to recidivism change for any variable (excluding the analysis of the seriousness of the subsequent crime).

Before discussing the actions taken during the court process which had some apparent impact on recidivism, it is also important to mention those that did not. The final disposition of the first case during 1973 did not appear to have a significant impact on recidivism, after holding other factors constant. In the previous section discussing bivariate results, the disposition of the case did appear to have an impact on subsequent recidivism. From this analysis, where many factors have been controlled, it would seem that it is not the experience that defendants had in pleading to a case in 1973 that "caused" them to be rearrested for another crime, but rather that persons who pled are the types of defendants who are most likely to be recidivists. There was no single type of disposition which appeared to be important in predicting recidivism using any of the different measures, including seriousness.

Two other variables which never appeared as being important were the time between offense and arrest and whether the defense attorney was a Public Defender.

There were four factors which did seem to have an impact on recidivism, except for the measure of seriousness: whether the case was assigned to the Major Violators Unit for serious misdemeanants, whether the defendant was successful in a diversion program for first offenders, the time the first case was in the criminal justice system before final disposition, and the type of bail decision made by the judge at arraignment.

Assignment of a case to the Major Violators Unit had a positive effect on recidivism for each of the four measures of the frequency of recidivism: rearrest, reprosecution, reconviction, and rearrest within six months. (About nine percent of the defendants whose first case was prosecuted in 1973, were assigned to the unit). There are many possible explanations for this finding. One is that since the Major Violators Unit is supposed to be targeting on persons who have committed a misdemeanor but have serious criminal histories, such persons would be a group likely to be recidivists. The variables included in the analysis on previous criminal history should account for their propensity to recidivism, based on prior criminal activity, but if these data are incomplete, it may cause assignment to the Major Violators Unit to have some effect. A further confounding factor is that if the persons who are specially assigned were incarcerated pretrial or after a guilty disposition, they would not have the opportunity to commit another crime. It is clear that at some point they were not being detained, since they were rearrested. A question to be explored in further research is whether they committed the new crime before the final disposition of the first case, or after having received a sentence which did not involve incarceration.

In Washington, D.C., some first offenders committing misdemeanors can be assigned to a special diversionary program after arraignment. If the defendant successfully completes the program, the case against him is nollied by the prosecutor. Project Crossroads and First Offender Treatment are the largest of the five diversionary programs. Six and seven percent, respectively, of all the defendants in 1973 whose first case was papered completed the programs successfully. Success in either of these two programs appeared to have a negative effect on recidivism, for each measure of the frequency of recidivism (except for reconviction, which would be impossible, since the first case was nollied). The negative effect was greater for Project Crossroads than First Offender Treatment, although both effects were relatively small. As with assignment to the Major Violator's Unit, it may be that it is the fact that persons who are diverted are less likely to be recidivistic, rather than an effect from the program itself.

Another variable which appeared to be an important determinant of recidivism was the time a case was in the system. There were two measures of time in system entered as independent variables: the number of continuances and the time between arrest and final disposition. Since these two measures are highly correlated, if one were eliminated the effect of the other would be greater. Both of the variables had a positive effect on recidivism. This is consistent with a general hypothesis of this research, stated earlier in this paper, that inefficiency as measured by time delays is likely to increase the likelihood of recidivism.

The bail decision made by the judge at arraignment was one result which varied depending upon the measure of recidivism. The two measures of recidivism to be discussed are the number of cases papered in 1973 and whether the defendant was rearrested within six months. Using number of cases papered during 1973, three bail decisions had negative effects on recidivism: release on personal recognizance, surety bond, and cash bond. The possible explanations for why these decisions might deter recidivism vary. The persons released on recognizance are probably the "best risks" and therefore the least likely to be rearrested. Those defendants for whom a surety or cash bond is set, however, are the more serious defendants. Some proportion of those for whom a bond was set probably did not make the bond and therefore were detained pretrial. When actual release status can be more accurately established, this explanation can be examined more carefully. Two other bail decisions were important when the measure of recidivism was rearrest in six months: third-party custody and assignment to the Rehabilitation Center for Alcoholics. Both of these decisions had a positive effect on recidivism.

There was not a single action taken during case processing that had a significant effect on the seriousness of the second case if the defendant was rearrested within six months. When only the variables available at papering were included in the analysis, three variables were significant: the defendant's sex, whether the previous case was a felony, and the seriousness of the previous case on the Sellin-Wolfgang Score. Only one additional variable was significant after adding all of the case processing variables--whether the previous case was a business robbery. It appears possible for the present criminal justice system

in the District of Columbia to influence whether a defendant commits another crime, but not to be able to influence the seriousness of that second crime, if it is committed.

#### Conclusions

There were two basic purposes in looking at recidivism within a single year. One was to establish the methodology to be used in the longer panel analysis and the other was to tentatively describe the factors which seem most important in predicting recidivism and outline the resulting policy implications, which result if the tentative findings are confirmed by further research. In this section, the findings will be summarized and the implications discussed. In the final section, questions to be addressed in future research will be mentioned.

One of the primary findings of this analysis is that personal characteristics of the defendant and characteristics of his criminal history were more important determinants of recidivism than any of the actions taken by the criminal justice system during case processing. Personal characteristics of the defendant were important in determining both the frequency and seriousness of future criminal acts. Race, age, sex, employment status, alcohol abuse and opiate use were all statistically significant in several of the analyses, although the fact that a defendant was male was the only personal characteristic which predicted both frequency and seriousness. Use of opiates, race and employment status were found to be significant in almost every analysis of the frequency of recidivism. Two variables which were never significant were the length of time last job was held and whether the defendant had a physical disability or bad health. It is not clear what policy should be implemented

if these personal characteristics continue to be important in future analyses. The goal of reducing recidivism is an important goal, but evenhandedness of treatment is also a goal for a criminal justice system. Because male defendants are more likely to recidivate and commit more serious crimes than females, should they be treated more severely than female defendants? Such a question is a difficult one to answer and involves some basic value judgements about the goals of criminal justice.

The six items on a defendant's criminal history, five of which are presently included in the Base Expectancy Scale, turned out to be significant. First arrest for auto theft was the only variable which was never significant. The number of previous arrests was consistently the more important predictor, with the item on whether the defendant was arrested in the past five years and the time since most recent arrest the second most important variables. Whether the defendant has used an alias and the number of previous arrests for crimes against persons were only important in two of the regressions. Past criminal history seems to be a good predictor of future criminal activity. Further data on the types of previous crimes, past convictions and periods of incarceration would probably increase the predictive power based on past criminal activity. The only item which should not be collected in the future is whether the defendant's first arrest was for auto theft.

As mentioned earlier in the paper, there are two clusters or types of crimes committed by recidivists--one much more serious than the other. Consensual sex offenders, mostly prostitutes, are likely to be rearrested, reprosecuted and reconvicted. The other more serious group is composed

of persons committing property crimes. Personal robberies, residential burglaries and business larcenies were the types of crimes committed by persons likely to recidivate in every analysis of frequency. These crime categories comprised a large proportion of the crimes committed during 1973. Out of 15,460 cases, there were 1,440 personal robberies, 1,174 residential burglaries, and 1,059 larcenies. Persons committing such crimes are a possible target group for application of more resources of the prosecutor.

As far as actions taken by the criminal justice system, the findings of the 1973 analysis have implications which lead in some areas to the need for further research before recommendations can be made.

Persons whose cases are assigned to the Major Violators Unit appear to have an increased chance of recidivism. Further analysis is needed to find out when the recidivistic event is taking place. If it is pre-trial, perhaps more emphasis should be placed on detaining such persons. If they are rearrested after conviction, a look at sentencing is in order. If they are rearrested because they were not convicted, still another implication results. Another problem to be addressed is whether the Major Violators Unit has any effect on recidivism independent of the type of defendants assigned to the unit.

The diversion programs, Project Crossroads and First Offender Treatment, seem to be having a negative effect on recidivism. This appears to be a viable alternative for some defendants. Further research can identify which persons are likely to be successful in the programs.

The time between arrest and final disposition appears to be an important determinant of recidivism. Detention of persons most likely

to be rearrested and an added emphasis on speedy trial for these defendants would seem appropriate.

The fact that no actions taken during case processing available for analysis appear to affect the seriousness of the recidivistic act may have important implications. Perhaps a two-step process for identifying recidivists would be most effective. For lesser crimes, actions can be taken to reduce frequency. For those defendants identified as likely to be arrested and commit serious crimes, the emphasis could be on removing their opportunity to recidivate, by either pretrial detention or incarceration for those found guilty.

These conclusions are tentative for many reasons. They are suggestive, however, of what future analyses may show. In the next section, some further research questions arising from the first year's research will be mentioned.

#### Further Research

The research design for the recidivism analysis calls for following a panel of defendants for several years in order to develop a reliable method of predicting recidivism. When the panel is studied for the longer period, additional data will also be assembled which was missing from the analysis of recidivism within one year. Specifically, sentencing and incarceration data will be added as well as some additional variables on a sample basis.

In addition to these basic changes, there were certain questions raised by the analysis of recidivism during 1973 which should be resolved. One such question concerns the Major Violators Unit. Why does special assignment of certain misdemeanors to this unit have a positive

effect on their probability of recidivism? When are they committing the next crime, pretrial or after final disposition? There are questions also in regard to first offenders. A separate analysis of the first offenders could identify which are more likely to recidivate and also would provide a better analysis of the effect of diversion programs.

**END**