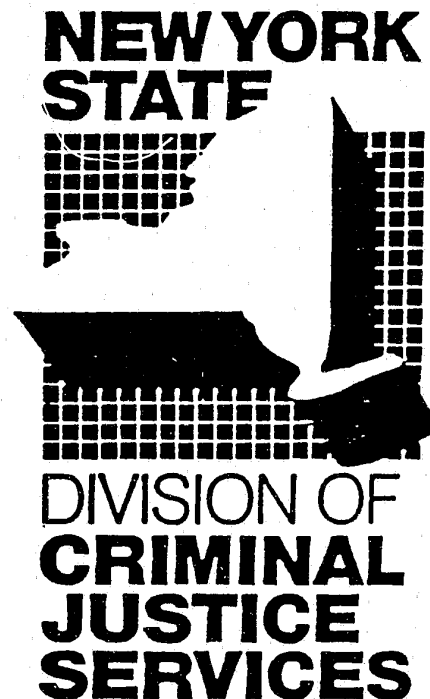


OFFICE OF JUSTICE SYSTEMS ANALYSIS

RACIAL AND ETHNIC DISPARITIES IN PROCESSING PERSONS
ARRESTED FOR MISDEMEANOR CRIMES:
NEW YORK STATE, 1985 - 1986

JULY, 1991

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**RACIAL AND ETHNIC DISPARITIES IN PROCESSING PERSONS
ARRESTED FOR MISDEMEANOR CRIMES: NEW YORK STATE, 1985-1986**

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Acknowledgments

I would like to thank Bruce Frederick, Steven Greenstein, David van Alstyne, Vince Manti, Henry Brownstein, Donna Hall, William Wilbanks, Sherwood Zimmerman, Carl Pope, James Gilmer, and Richard Dehais for helpful comments and critical reviews.

TABLE OF CONTENTS

Executive Summary	i
I. Introduction	1
II. Research Design	2
A. The Data Set	2
B. Definitions	5
1. Disparity	5
2. Case Processing: Outcomes and Decisions	6
3. County Unit	9
4. Arrest Charge	10
5. Prior Criminal Record	15
6. Concurrent Felony Arrests	16
III. Preliminary Observations	16
IV. Statistical Models of Processing Outcomes	17
A. Culpable Defendants	19
1. Logit Parameters and Disparity Percentages	22
B. ACD Dispositions	25
C. Convictions	27
D. Charge Reductions	29
E. Incarcerations	31
1. Jail and Time Served Outcomes	31
2. Jail Outcomes	34
3. Defining Time Served as an Incarceration Outcome	36
4. A Charge Specific Analysis	41
5. Average Incarceration Disparity Percentages	49
6. Disparities in the Least Populous Counties	52
F. Interrelationships Among Processing Outcomes	56
1. Culpability	58
2. ACD Dispositions	58
3. Convictions	60
4. Charge Reductions	60

TABLE OF CONTENTS

-continued-

5. Incarcerations	60
6. Summary	61
V. Statistical Models of Sentencing Decisions	61
A. Types of Sentences	61
1. Jail	62
2. Fines	64
3. Discharges	64
4. Probation	64
5. Jail, Fines, and Discharges	68
B. Sentence Lengths	70
C. Fine Amounts	76
VI. Possible Explanations	81
A. Discrimination	81
B. Education and Institutional Discrimination	81
1. Economic Status Measured by Free Legal Counsel.	83
2. Disparities Attributable to Differences in Economic Resources	85
3. Summary of Differences in Economic Status	93
C. Individual Discrimination and Prejudices	93
D. Summary	94
VII. Discussion.	95
A. Major Findings.	95
B. Policy Recommendations.	97
1. Day-Fines	97
2. The Alternatives to Incarceration Program	98
3. Recommendations	99
VIII. References	101
IX. Appendices	103

TABLE OF CONTENTS

-continued-

Appendix A: Case Characteristics	103
1. Arrest Charge by County	103
2. Arrest Charge by Minority Status	103
3. Arrest Charge by Minority Status by County	106
4. Prior Criminal Record by Minority Status	108
5. Prior Criminal Record by Minority Status by County	109
6. Demographic Variables	110
a) Gender by Minority Status by County	111
b) Gender by Minority Status by Arrest Charge	112
c) Age by Minority Status by County	113
Appendix B: Modeling Minority Percentages	115
Appendix C: Regression Model of Sentence Length	115

LIST OF TABLES

TABLE 1:	Court and Type of Lower Court Disposition for Defendants Who Were Arrested for Misdemeanor Charges and Whose Cases Were Disposed in 1982, New York State	4
TABLE 2:	Processing Outcomes and Sentencing Decisions Used to Estimate Disparities in Case Processing, 1985-1986	7
TABLE 3:	The Number and Percentage of Defendants by Minority Status and County, 1985-1986	10
TABLE 4:	Crime Type by Article in NYS Penal Law	12
TABLE 5:	Most Frequently Occurring Arrest Charges Classified by Seriousness Level and Crime Type, New York State, 1985-1986 . . .	13
TABLE 6:	Observed and Modeled Percentage of Defendants Who Were Processed as Culpable Defendants by Minority Status, Prior Record, and County, 1985-1986	21
TABLE 7:	Observed, Modeled, and Disparity Percentages Based Upon A Logit Parameter of .2348	23
TABLE 8:	Observed and Modeled Percentage of Culpable Defendants Whose Cases Were Adjourned in Contemplation of Dismissal by Minority Status, Prior Record, and County, 1985-1986	26
TABLE 9:	Observed and Modeled Percentage of Defendants Who Were Convicted by Minority Status, Prior Record, and County, 1985-1986	28
TABLE 10:	Observed and Modeled Percentage of Defendants Who Were Convicted Without a Charge Reduction by Minority Status, Prior Record, and County, 1985-1986	30
TABLE 11:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail or Time Served by Minority Status, Prior Record, and County, 1985-1986	33

LIST OF TABLES

-continued-

TABLE 12:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail by Minority Status, Prior Record and County, 1985-1986	35
TABLE 13:	The Percentage of Defendants Who Were Sentenced to Time Served by Final Disposition, Minority Status, Prior Record, and County, 1985-1986	37
TABLE 14:	Goodness-of-Fit Statistics for 17 Models of Incarceration, 1985-1986	42
TABLE 15:	Disparity Percentages Based on 17 Models of Incarceration by Arrest Charge, Prior Record, and County, 1985-1986	44
TABLE 16:	Disparity Percentages and Logit Parameters for 17 Models of Incarceration Averaged Across County by Arrest Charge and Prior Record, 1985-1986	48
TABLE 17:	Disparity Percentages and Logit Parameters for 17 Models of Incarceration Averaged Across Arrest Charge by County and Prior Record, 1985-1986	50
TABLE 18:	Number and Percentage of Defendants by Minority Status and County: Arrest Based Data, NYS, 1985-1986	54
TABLE 19:	Observed Percentages of Whites and Minorities Who Were Sentenced to Jail or Time Served for Theft Arrest Charges by Prior Record and County: Arrest Based Data, NYS, 1985-1986	57
TABLE 20:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, NYS, 1985-1986	63
TABLE 21:	Observed and Modeled Percentage of Defendants Who Were Fined Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, NYS, 1985-1986	65

LIST OF TABLES

-continued-

TABLE 22:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Discharge Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, 1985-1986	66
TABLE 23:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Probation Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, 1985-1986	67
TABLE 24:	Average Number of Days Sentenced to Jail by Arrest Charge, County, Prior Record Score, Related Felony Arrests, Age, Sex, and Minority Status, 1985-1986	71
TABLE 25:	Summary of 12 Regression Analyses of Jail Sentence Length, 1985-1986	74
TABLE 26:	Average Fine for Defendants Who Were Sentenced to a Fine by Arrest Charge, Prior Record Score, Concurrent Felony Arrests, Age, and Gender by Minority Status, 1985-1986	77
TABLE 27:	Observed and Modeled Fines by Prior Arrest Record, Minority Status and County, 1985-1986	80
TABLE 28:	Percentage of Defendants Who Had a Court Supplied Attorney Given that They Were Indicted for a Felony Crime by County, Prior Arrest Record, and Minority Status, New York State, 1985-1986.	84
TABLE 29:	Economic Status by Prior Arrests and Minority Status, New York City, CJA Data Set, 1985-1986.	87
TABLE 30:	Observed and Modeled Percentages of Defendants Who Were Sentenced to Fines and Amount of the Disparity Percentage that Could be Explained by Economic Differences for Defendants Who Were Sentenced to Jail, Fines, Probation or Discharge by Minority Status, Prior Arrest Record, Economic Status, and County, CJA Matched Data Set, 1985-1986	88

LIST OF TABLES

-continued-

TABLE 31:	Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail and Amount of the Disparity Percentage that Was Due to Economic Differences for Defendants Who Were Sentenced to Jail, Fines, Probation or Discharge by Minority Status, Prior Arrest Record, Economic Status, and County, CJA Matched Data Set, 1985-1986.	89
TABLE 32:	Logit Parameters for Sentences to Fines and Sentences to Jail, CJA Matched Data, 1985-1986.	91
TABLE A1:	Percentage of Defendants by Crime Type, Seriousness Level, and County, 1985-1986	104
TABLE A2:	Number and Percentage of Defendants Classified by Minority Status, Arrest Charge, Charge Seriousness, and Crime Type, 1985-1986	105
TABLE A3:	Charge Concentrations for Minority Defendants by County and Arrest Charge, 1985-1986	107
TABLE A4:	Number and Cumulative Percentage of Defendants by Minority Status and Prior Record Score, 1985-1986	108
TABLE A5:	Average Prior Record Score and Percentage of Defendants With No Prior Record by Minority Status and County, 1985-1986	109
TABLE A6:	The Percentage of White and Minority Defendants With One or More Concurrent Felony Arrests by County, 1985-1986	110
TABLE A7:	Number and Percentage of Female Defendants by Minority Status, and County, 1985-1986	111
TABLE A8:	Percentage of Female Defendants by Minority Status, Arrest Charge, and Charge Seriousness Level, 1985-1986	113
TABLE A9:	Percentage and Concentration of Minority Defendants by Age and County, 1985-1986	114

LIST OF FIGURES

Figure 1:	Scatter Diagrams of Disparity Percentages and Logit Parameters for 11 Counties Using Two Definitions of Incarceration for Defendants Without Prior Arrest Records, NYS, 1985-1986.	38
Figure 2:	Scatter Diagrams of Disparity Percentages and Logit Parameters for 11 Counties Using Two Definitions of Incarceration for Defendants With Prior Arrest Records, NYS, 1985-1986	39
Figure 3:	Scatter Diagrams of Average Incarceration Disparity Percentages and Average Incarceration Logit Parameters for 17 Arrest Charges, NYS, 1985-1986	47
Figure 4:	Scatter Diagrams of Average Incarceration Disparity Percentages and Average Incarceration Logit Parameters for 11 Counties, NYS, 1985-1986.	51
Figure 5:	A Scatter Diagram of Average Incarceration Disparity Percentages by Average Incarceration Logit Parameters for 11 Counties, NYS, 1985-1986.	53
Figure 6:	Scatter Diagrams of Disparity Percentages for Processing Outcomes by Average Incarceration Disparity Percentages, NYS, 1985-1986 . . .	59
Figure 7:	Scatter Diagrams of Disparity Percentages for Sentencing Decisions by Average Incarceration Disparity Percentages, NYS, 1985-1986 . . .	69

Executive Summary

In a previous study of case processing, Nelson (1991) showed that black and Hispanic defendants were sentenced to jail or prison more often than similarly situated white defendants. Differences in the percentage of white and minority defendants who were sentenced to jail or prison could not be explained by differences in arrest charges, prior criminal records, or county of jurisdiction. Nelson's research demonstrated that minorities were sanctioned more severely than whites due to decisions that occurred between arrest and final disposition. It did not show whether disparities were associated with particular case processing decisions, or whether disparities affected sentence lengths for persons who were sentenced to incarceration.

The present study was undertaken to learn if disparities were associated with particular crimes, criminal histories, jurisdictions, and post-arrest processing decisions for persons arrested for misdemeanor crimes. The study focuses upon misdemeanor crimes, because relatively little is known about disparities in lower courts. Almost all misdemeanor cases are processed in lower courts. Most disparity studies have focused upon how felony cases are processed in upper courts. Yet the risk of disparity in case processing may be even greater for misdemeanors processed in lower court where, compared to felony processing in upper court, discretion is high and visibility is low.

The present study analyzes the experiences of one-quarter of a million persons arrested for misdemeanor offenses in New York State in 1985 and 1986. It is limited to arrest charges that frequently occurred to both whites and minorities throughout the State. There were not enough comparably situated whites and minorities to estimate disparities for DWI and prostitution charges. Most of the defendants charged with prostitution were females arrested in New York City. DWI arrests almost exclusively occurred to whites in counties outside of New York City. In addition, the prior record score developed for this study was not valid for modeling incarceration for DWI charges (see Nelson, 1989). Including the aforementioned charges in the analyses could have seriously distorted the statistical models used to measure disparity, and could have produced artifactual conclusions that may not have been valid for any arrest charge.

Statistical models are used to control for differences in the type and seriousness of arrest charges, the extent of prior criminal records, and the county of jurisdiction. The models demonstrate that disparities varied by county and arrest charge; were least likely to affect defendants who were arrested for the first time; and were particularly likely to affect fine and incarceration decisions.

Research Methods

Disparities were estimated for comparably situated white and minority defendants. Defendants who were arrested in the same county for the same offense, who had similar criminal records, and who (where applicable) were convicted of offenses at the same level of seriousness, were considered to be comparably situated. Arrest offenses were represented by a 17-category variable that described the type and seriousness of the most serious arrest charge. Prior criminal records were measured by a five point scale that summarized the number and seriousness of arrests and convictions that preceded the instant offense. Concurrent felony arrests (arrests that occurred within 6 months of the instant offense) were measured by a three point scale. Disparities were estimated within each of the ten most populous counties of the State, and within the remaining 52 counties analyzed as if the defendants in these counties were processed in a single county.

Processing Outcomes. Disparities were measured for different types of processing outcomes. Several analyses examined disparities in the probability of incarceration given arrest. Disparities in these probabilities were due to the combined effects (both positive and negative) of all case processing decisions that occurred between arrest and final disposition. Other analyses examined disparities in the probability of outcomes that occurred between arrest and sentencing. Specific outcomes examined included culpable disposition¹ (given arrest), adjournment in contemplation of dismissal (given culpable disposition), conviction (given arrest), charge reduction (given conviction), and sentencing decision (given conviction).

Disparity Percentages. Statistical models were used to estimate disparity percentages (DPs). The DPs reflect typical differences in how often comparably situated whites and minorities received particular dispositions within each county. They were calculated by subtracting the observed percentage of whites receiving a particular disposition from the adjusted percentage of minorities receiving the same disposition. A positive DP indicates that comparably situated minorities received a particular disposition more often than whites, and a negative DP indicates that whites received the disposition more often than comparably situated minorities.

For example, in one county the DP for sentences to jail given arrest equalled +16 for defendants with prior arrest records. In this county, 10 percent of the whites having prior arrest records were sentenced to jail. In contrast, 26 percent of the minorities having similar characteristics would be sentenced to jail. This difference of +16 represents the

¹ Culpable dispositions included convictions and adjournments in contemplation of dismissal (ACDs), because defendants were disposed as though they had committed culpable acts. Almost all other defendants were dismissed. "Culpable disposition" is roughly equivalent to "not dismissed."

typical percentage of minorities who would not have been sentenced to jail had they been processed as whites. The excess percentage cannot be explained by differences in arrest charges and prior criminal records observed for whites and minorities within this county.

DPs were calculated separately for defendants with and without prior arrest records. DPs for defendants with prior arrest records illustrate disparities for minorities who were arrested for the same charge, had the same score on the five point prior record scale, and had the same number of concurrent felony arrests as the average white defendant with a prior arrest record within each county.

The Magnitude of Disparity Percentages

Processing outcomes. The ranges of disparity percentages for processing outcomes and sentencing decisions are presented in the table below. The number of counties that had significant disparities are listed in parentheses. The table shows that:

- DPs varied considerably from county to county.
- In several counties, whites received culpable dispositions (i.e., had their cases disposed with adjournments in contemplation of dismissal or convictions) more often than minorities. In these counties, minorities had their cases dismissed more often than whites.
- In several counties, whites were granted ACDs more often than minorities.
- Whites were convicted more often than minorities in some counties and minorities were convicted more often than whites in other counties.
- Minorities were incarcerated more frequently than comparably situated whites. Disparities were particularly large for defendants with prior arrest records.
- Convicted minorities were sentenced to probation about as often as convicted whites.
- Convicted minorities were sentenced to conditional or unconditional discharge more often than convicted whites. DPs were especially large for defendants without prior arrest records.
- Convicted whites were sentenced to pay fines more often than convicted minorities. DPs for fines were relatively large regardless of prior arrest record.
- Convicted minorities were sentenced to jail more often than convicted whites. DPs were especially large for defendants with prior arrest records.

Range of Disparity Percentages for Processing Outcomes				
Outcome	Range of Significant DPs* (Number of Counties with Significant DPs in Parentheses. Maximum is 11.)			
	No Prior Arrests		Prior Arrests	
Culpable disposition given arrest	-11	to +5 (4)	-14	to -2 (4)
ACD given culpable disposition	-13	to -3 (4)	-9	to -2 (5)
Conviction given arrest	-4	to +10 (5)	-8	to +8 (6)
No charge reduction given conviction	-5	to +3 (5)	+3	to +14 (8)
Jail or time served given arrest	+1	to +4 (11)	+2	to +20 (11)
Jail given arrest	+1	to +2 (7)	+2	to +16 (9)
Probation given conviction	--	(0)	-8	(1)
Discharge given conviction	+3	to +24 (8)	-4	to +15 (6)
Fine given conviction	-25	to -4 (10)	-23	to -7 (11)
Jail given conviction	+2	to +5 (7)	+8	to +25 (10)

*Positive DPs indicate dispositions received more often by minorities;
negative DPs indicate dispositions received more often by whites.

Disparities in the length of jail sentences and in the amount of fines were estimated by regression models. The analyses showed that there were no disparities in setting the length of jail sentences but there were disparities in setting the amount of fines. Among defendants without prior arrest records, minorities were fined from 7 to 31 percent less than whites in seven counties; they were fined 7 percent more than whites in one county. Among defendants with prior arrest records, minorities were fined from 10 to 24 percent less than whites in six counties.

Average incarceration disparity percentages. The outcome "sentenced to jail or time served" (given arrest) was analyzed in considerable detail. Separate DPs were measured for each arrest charge within each county. These separate DPs were averaged across counties to estimate DPs by arrest charge. They were averaged across arrest charges to estimate DPs by county.

- **Charges.** The average incarceration DPs by arrest charge showed that disparities were particularly high for possession of weapons, criminal trespass, possession of burglar tools, theft, possession of a controlled substance, and resisting arrest charges. They were particularly low for aggravated harassment, endangerment of a child, gambling, menacing, sexual abuse, and bad checks.
- **Counties.** The average incarceration DPs by counties showed that disparities varied considerably by jurisdiction. They ranged from +1 to +5 for defendants without prior arrest records; from +3 to +21 for defendants with prior arrest records; and from +2 to +11 overall.

Relationships Among Disparity Percentages

The DPs for individual processing outcomes were compared to average incarceration DPs for each county to show how disparities in each processing decision were related to disparities in other decisions. The most striking relationships involved sentencing decisions. The statistically significant DPs for sentences to jail, fines, and conditional or unconditional discharge are displayed in the table below.

Significant Disparity Percentages by County for Sentences to Discharge, Fines, and Jail*						
Avg. Inc. DP**	No Prior Arrests			Prior Arrests		
	Disch	Fine	Jail	Disch	Fine	Jail
11.2	+4	-8	+4	+5	-20	+15
10.2	+5	-10	+3		-20	+20
8.7	+13	-14		+7	-20	+21
8.6			+3		-18	+23
8.5		-7	+4		-21	+25
7.2	+5	-8	+3		-14	+15
5.4	+3	-4	+2		-7	+11
5.0		-7	+5	-4	-10	+13
4.0	+14	-16		+10	-12	
2.8	+24	-25		+15	-23	+8
1.8	+21	-21		+10	-16	+10

*Positive DPs indicate dispositions received more often by minorities; negative DPs indicate dispositions received more often by whites; blank cells indicate nonsignificant DPs.

**Counties are ordered by their average incarceration DP.

The interdependencies among sentencing disparities can be understood by looking separately at DPs for defendants with and without prior arrest records.

Among defendants without prior arrest records, disparities in fines were balanced primarily by disparities in discharges and secondarily by disparities in jail sentences. Whites were fined more often than minorities, but minorities were sentenced to discharge or jail more often than whites. In the three counties with the lowest average incarceration DPs, unusually large DPs in fines were balanced by unusually large DPs in the other direction in discharges. There were no significant disparities in jail sentences. However, in seven of the other eight counties, disparities in fines were not balanced solely by disparities in discharges. Instead, they were balanced by significant disparities in both jail and discharge sentences.

Among defendants with prior arrest records, disparities in fines were balanced primarily by disparities in jail sentences and secondarily by disparities in discharges. In two of the three counties with the lowest average incarceration DPs, disparities in fines were almost balanced by disparities in discharges. In the eight counties with the highest average incarceration DPs, disparities in fines were almost balanced by disparities in jail sentences. Disparities in fines were partially balanced by disparities in discharge sentences in only two of these eight counties.

Disparities in Smaller Counties

Disparities in sentences to jail or time served in many of the smaller counties of the State were estimated by focusing upon theft charges that could result in at most a 6 month jail sentence. Theft was chosen for analysis because it was the most commonly occurring arrest charge and because it exhibited relatively high degrees of disparity. Disparities were approximated by subtracting the observed percentage of whites who were sentenced to jail or time served from the observed percentage of minorities who were so sentenced. The differences were calculated separately for defendants with and without prior arrest records. The analyses were done in counties that had at least 25 defendants arrested for each combination of minority status (white vs. minority) by prior arrest record (yes vs. no).

The comparisons showed that minorities were incarcerated more often than whites in almost every county. Among defendants without prior arrest records, minorities were incarcerated more often than whites in 25 out of 27 counties. Among defendants with prior arrest records, minorities were incarcerated more often than whites in 26 out of 27 counties. These patterns suggest that the disparities that were found in the ten largest counties of the State also occurred in the smaller counties of the State.

Summary

The largest and most consistent disparities involved sentencing decisions. Whites were sentenced to fines more often and frequently for larger amounts than comparably situated minorities. In contrast, minorities were sentenced to jail more often than comparably situated whites. Among defendants without prior arrest records, disparities in sentences to fines were primarily balanced by disparities in discharge sentences. Among defendants with prior arrest records, disparities in sentences to fines were primarily balanced by disparities in jail sentences. There were no disparities in setting the length of jail sentences.

Possible Explanations

Disparities in case processing decisions are frequently attributed to economic differences and racist attitudes. The economic difference explanation was tested directly by asking whether minority defendants were poorer than white defendants, and by estimating the effect that economic differences had on disparities in sentencing decisions in New York City. The prejudicial attitude explanation was examined indirectly by asking if the pattern of disparities uncovered in this research could have been generated by racist attitudes of prosecutors, defense attorneys and judges.

The analysis of economic differences showed that minority defendants were poorer than white defendants, but that the largest differences in economic resources occurred among defendants who were least likely to experience disparities in case processing (i.e., defendants with no prior arrest records). This suggests that economic differences are not likely to account for all disparities in case processing. An examination of disparities in sentencing decisions showed that differences in economic resources could account for about 25 percent of the magnitude of the DPs for defendants who were held in jail in New York City before arraignment. This was the only group of defendants for whom economic data were readily available for testing the economic explanation.

The finding that economic differences cannot account for all disparities does not mean that the remaining disparities were caused by racist attitudes. The only way to directly test whether racist attitudes affect case processing is to measure racial prejudices of attorneys and judges and then demonstrate how they are related to disparities in case processing.

The possibility that disparities were caused by blatant forms of racism was investigated indirectly by asking if it was plausible that blatant racial prejudice generated the different types of disparities uncovered by this research. The analyses suggest that they could not. Blatant forms of racism do not appear to explain why minorities were sentenced to conditional discharge more often than whites; why minorities were sentenced to smaller fines than whites; or why minorities were sentenced to the same length of imprisonment as whites.

Recommendations

The study documented widespread disparities in post-arrest case processing of persons arrested for misdemeanor crimes, and identified the counties, arrest charges, criminal records, and processing decisions for which disparities were most likely to occur. The largest disparities involved fines and jail sentences for persons with prior arrest records. The tendency to fine whites but to incarcerate minorities suggests that the criminal justice system failed to provide non-incarcerative sanctions to persons who had prior records and who lacked or who were perceived to lack money to pay fines. This suggests that disparities in case processing can be reduced by developing alternatives to incarceration and/or by developing new ways to fine poor defendants. In particular, the day-fine system represents a promising method for reducing disparities in sentencing decisions.

The study also demonstrated that disparities in ACD decisions, case dismissals, convictions, and plea bargains varied by county. This variability suggests that no single statewide program can be designed to effectively reduce disparities in all counties. Much of the responsibility for diagnosing the causes of disparities and for developing strategies to alleviate them lies with local criminal justice officials. These persons are in a much better position to interpret the disparities uncovered in this research than are state officials.

Disparities must be systematically measured over time to ensure that all persons are processed equitably. Comparisons of disparities across time and location are needed which measure both the extent of disparities and the effectiveness of programs designed to reduce them. The responsibility for measuring disparities should rest primarily with state officials.

Specific recommendations include:

- The Division of Criminal Justice Services should regularly publish a set of indices that monitor disparities.
- County Advisory boards should develop guidelines for sanctioning misdemeanants who have prior records but who do not appear to have resources to pay fines.
- Day-fine projects should be implemented in at least one of the major counties of New York City and in at least one populous county outside of New York City. The programs should be designed to test whether day-fines effectively decrease disparities in processing misdemeanor arrestees.
- The Alternatives to Incarceration (ATI) Programs in New York State should be evaluated on a regular basis. Such evaluations should include examining the extent to which ATI programs affect disparities in sentencing.

- The conditions imposed on conditional discharge sentences should be recorded in a central data base. There is currently no way for state-level analysts to assess the severity of these sanctions.
- Pretrial detention should be recorded in a central data base. There is currently no way for state-level analysts to monitor disparities in pretrial detention.

**RACIAL AND ETHNIC DISPARITIES IN PROCESSING PERSONS
ARRESTED FOR MISDEMEANOR CRIMES:
NEW YORK STATE, 1985-1986**

I. Introduction

In a study of adults who were arrested for misdemeanor or felony crimes in New York State, Nelson (1991) showed that black and Hispanic defendants were more likely than white defendants to be incarcerated. The differences could not be accounted for by differences in arrest charges, prior criminal records, or county of jurisdiction.

Nelson's report demonstrated that minorities were treated more severely than whites somewhere between arrest and sentencing. It did not show whether disparities were associated with particular case processing decisions, or whether disparities affected sentence lengths for defendants who were sentenced to incarceration.

The present research examines disparities in processing outcomes and sentencing decisions for persons who were arrested for misdemeanor crimes based upon penal law. The study does not examine the arrest decision. It does not estimate disparities for persons who were arrested for driving while intoxicated crimes or who were arrested for prostitution crimes. Within these limitations, the research demonstrates that minorities were sanctioned more severely than whites. In half of the counties tested, whites received adjournments in contemplation of dismissal more often than minorities. In most counties, whites with prior arrest records had their charges reduced more often than comparably situated minorities. In every county tested, whites were fined more often than minorities, and minorities were incarcerated more often than whites. Among defendants without prior arrest records, disparities in sentences to fines were primarily balanced by disparities in sentences to discharges. Minorities were sentenced to conditional or unconditional discharge more often than comparably situated whites. Among defendants with prior arrest records, disparities in sentences to fines were primarily balanced by disparities in jail sentences. Minorities were sentenced to jail much more often than comparably situated whites.

Analyses of fine amounts and jail sentence lengths showed that minorities were treated no more severely than whites. Whites and minorities who were arrested for similar charges, who had similar criminal records, who were processed in the same county, and who were sentenced to jail, were sentenced to the same time in jail. In about half of the counties tested, minorities were sentenced to lower fines than comparably situated whites.

Documenting disparities in case processing decisions does not demonstrate that persons in the criminal justice system acted in a prejudicial manner. Disparities could be caused by variables that were related to minority status and case processing decisions but that were not measured in the present study. Prejudicial attitudes are one possible cause of disparities in case processing. The only way to demonstrate that disparities are caused by prejudicial attitudes is to measure the attitudes and show that they are related to disparities in case processing.

Some but not all of the disparities uncovered in this research can be attributed to differences in economic resources. Minorities had fewer economic resources than whites. Differences in economic resources accounted for one-fourth of the magnitude of the disparity percentages for a subset of New York City defendants for whom economic data were available.

The largest disparities found in this research involved fines and jail sentences for persons with prior arrest records. The tendency to fine whites but to incarcerate minorities suggests that the criminal justice system failed to provide non-incarcerative sanctions to persons who had prior records and who lacked or who were perceived to lack money to pay fines. This suggests that disparities in case processing might be reduced by developing alternatives to incarceration and/or by developing new ways to fine poor defendants. In particular, the day-fine system represents a promising method for reducing disparities in sentencing decisions.

II. Research Design

A. The Data Set

The study summarizes disparities in case processing decisions that occurred to persons who were arrested for 17 types of misdemeanor charges between January 1, 1985 and December 31, 1986. The study is limited to the first arrest that occurred in this period.¹ Defendants whose first arrest in that period included felony charges are not analyzed in this report.

The study was based upon one arrest per defendant to ensure that the independence assumption needed by the statistical models was met. To satisfy the independence assumption, each observation in the study must be independently sampled from the same population. This assumption would not have been met if the study had been based upon all arrests that occurred during 1985-1986, because some defendants were arrested numerous times. Knowing a defendant's characteristics at one arrest provides considerable information about his or her characteristics at another arrest. In other words, a defendant's characteristics at the time of one arrest are not independent of his or her characteristics at the time of another arrest.

Arrest data were obtained from the Computerized Criminal History/Offender-Based Transaction Statistics (CCH/OBTS) data system maintained by the New York State Division of Criminal Justice Services. This system records arrest information, court dispositions, and defendant characteristics for persons charged with felony or misdemeanor offenses. Fingerprints are used to identify the same defendant over time.

The study was limited to case processing in lower courts because Harig (1985) showed that almost all persons arrested for misdemeanor charges in New York State were disposed in lower courts. Less than 1 percent of all misdemeanor cases disposed in 1987 were disposed in upper court. Harig's data are presented in Table 1.

¹ The data file supporting this study was created in July of 1988. The arrests in the sample had from 18 to 42 months to be disposed.

Most arrests with final dispositions in the CCH/OBTS data system were disposed within 18 months of the arrest. Final dispositions were not recorded for about 20 percent of all misdemeanor and felony arrests made between 1978 and 1986.

Limiting the analysis to one arrest per defendant removed inconsistencies in the data system. In most jurisdictions, multiple charges were recorded as one arrest. In some jurisdictions, multiple charges were sometimes recorded as separate arrests. Limiting the analysis to one arrest per defendant ensured that multiple charges were treated as one arrest in all jurisdictions.

TABLE 1: Court and Type of Lower Court Disposition for Defendants Who Were Arrested for Misdemeanor Charges and Whose Cases Were Disposed in 1982, New York State*

Court and Type of Lower Court Disposition	Number of Cases	Percentage
Court of Disposition		
Not Prosecuted	3,637	2.1%
Lower Court	169,420	97.1%
Upper Court	1,401	.8%
Total	174,458	100.0%
Type of Lower Court Disposition		
Case Dismissed	48,635	28.7%
Defendant Acquitted by Trial	448	.3%
Defendant Convicted by Trial	943	.6%
Defendant Convicted by Guilty Plea	119,065	70.3%
Other Disposition	329	.2%
Total	169,420	100.0%

*Data from T. Harig (1985), "Misdemeanor Offenders Disposed in 1982", Figures 1A and 1B, New York State Division of Criminal Justice Services.

This study does not estimate disparities for persons arrested for prostitution or driving while intoxicated charges. Preliminary analyses of all arrests in 1985 and 1986 showed that prostitution rarely occurred outside of New York City. Less than 1 percent of the misdemeanor arrests outside of New York City were for prostitution charges. In contrast, 15 percent of the arrests of minorities and 33 percent of the arrests of whites in New York City were for prostitution charges.

Disparities were not estimated for prostitution arrests in New York City counties because these arrests were treated quite differently than other arrests. The most obvious difference involved incarceration. Arrests for prostitution resulted in incarceration much more often than arrests for other charges. For example, two-thirds of the arrests for prostitution among defendants with prior arrest records in Bronx County resulted in sentences to jail. No other arrest charge came close to having this high an incarceration percentage. Analyzing prostitution with other charges could produce statistical models that do not accurately estimate disparities for any arrest charges.

Disparities were not estimated for DWI charges because minorities were seldom arrested for these crimes, and because there was no reason to believe that the same variables could be used to model disparities in both vehicle and traffic law and penal law crimes. Preliminary analyses of arrests in 1985-1986 showed that DWI arrests seldom occurred in New York City Counties. Here only 2 percent of the minorities and 3 percent of the whites arrested for misdemeanors were charged with DWI crimes. However, DWI crimes frequently occurred outside of New York City. Here, 2 percent of the minorities but 32 percent of the whites arrested for misdemeanors were charged with DWI crimes.

While there were enough whites and minorities arrested for DWI crimes to estimate disparities in several counties, it is not clear that the models developed for analyzing penal law crimes should be applied to DWI crimes. The problem is that prior criminal records should include arrests and convictions for driving offenses in the analysis of DWI charges but not necessarily in the analysis of penal law crimes. Furthermore, it is unclear whether arrests and convictions for penal law crimes should be included in the prior record variable for analyzing DWI processing. A separate study on constructing prior record variables for processing DWI charges needs to be completed before DWI and penal law charges can be analyzed in the same model.

In summary, prostitution and DWI charges were excluded from analysis so that disparities would show how comparably charged whites and minorities were processed in different counties of New York State. It was not possible to estimate disparities within counties for crimes that rarely occurred to either whites or minorities. Likewise, it was not possible to compare disparities across counties to the extent that crimes were concentrated in particular counties. The study was designed to quantify and locate disparities. It was not designed to describe typical case processing procedures in New York State.

B. Definitions

Disparities in processing white and minority defendants were measured by statistical models. The models show how the odds of particular outcomes were simultaneously affected by minority status, arrest charges, prior criminal records, concurrent felony arrests, and county of jurisdiction.

1. Disparity

Disparity was measured as a residual variable. It represents differences in how white and minority defendants were processed that cannot be explained by differences in arrest charges, prior criminal records, concurrent felony arrests, case processing variables, and county of jurisdiction.

The disparities estimated in this paper should not be equated with discriminatory actions based upon racial and ethnic prejudices. The disparities are attributable to variables that were systematically related to both minority status and processing decisions that occurred between arrest and final disposition. Racial and ethnic discrimination are just two possible causes. Unmeasured differences in economic status, charge severity, prior criminal records, demeanor, and community reputations are other possible causes.

2. Case Processing: Outcomes and Decisions

Disparities were estimated for decisions that occurred between arrest and final disposition. These decisions were modeled in a sequential fashion even though they all could have occurred at the arraignment hearing.

The decisions are grouped into processing outcomes and sentencing decisions. Processing outcomes summarize how cases were processed or sanctioned. Outcomes focus upon specific decisions that preceded sentencing, or upon combinations of decisions that occurred between arrest and sentencing. For example, one of the incarceration outcomes describes which defendants were sentenced to jail. Defendants who were not incarcerated could have had their cases dismissed, acquitted, or sentenced to discharge, probation, or fines. In contrast, sentencing decisions show how convicted defendants were sentenced. Disparities affecting conviction decisions are ignored in modeling sentencing decisions. The majority of disparity studies have focused solely upon sentencing decisions.

TABLE 2: Processing Outcomes and Sentencing Decisions Used to Estimate Disparities in Case Processing, 1985-1986

Processing Outcome or Sentencing Decision	Definition	Population of Defendants
Processing Outcomes:		
Culpable Dispositions	ACDs and Convictions vs. Dismissals, Acquittals, and Other Dispositions	Arrested Defendants
ACD Dispositions	ACDs vs. Convictions	Culpable Defendants
Convictions	Convictions vs. ACDs, Dismissals, Acquittals, and Other Dispositions	Arrested Defendants
No Reduction in Seriousness Level	Conviction Charge \geq Arrest Charge vs. Conviction Charge $<$ Arrest Charge	Convicted Defendants
Incarceration Outcomes	Sentences to Jail or Time Served vs. All Other Sentences, Dismissals, and Acquittals	Arrested Defendants
Jail Outcomes	Sentences to Jail vs. All Other Sentences, Dismissals, Acquittals	Arrested Defendants
Sentencing Decisions:		
Type of Sentence	Separate Analyses of Jail, Fines, Probation, and Discharges	Convicted Defendants Not Sentenced to Time Served
Sentence Length	Days Sentenced to Jail	Defendants Sentenced to Jail
Amount of Fine	Dollars Fined	Defendants Sentenced to Fines

The analysis began by asking which cases were disposed as if the defendant committed a culpable action. Cases were categorized as culpable if they were disposed with a conviction or an adjournment in contemplation of dismissal (ACD). Cases were categorized as not culpable if they were disposed with dismissals or acquittals. Very few cases were disposed with acquittals.²

Defendants who received an ACD were categorized as culpable even though an ACD is not "deemed to be a conviction or an admission of guilt" (Criminal Procedure Law, 170.55.6). ACDs were categorized as culpable dispositions because they resemble conditional discharges or probation sentences. Defendants who receive ACD dispositions can be required to pay restitution, to perform public services, and/or to observe specified conditions of conduct. The Criminal Procedure Law implicitly interprets an ACD disposition as an admission of guilt by prohibiting defendants from receiving more than one ACD for arrests involving marijuana charges.

The second outcome analysis shows which culpable defendants had their cases dismissed following an ACD. Culpable defendants whose cases were dismissed following an ACD were considered to have been treated leniently. The analysis was limited to culpable defendants to keep disparities in dismissing and acquitting cases from affecting estimates of disparities in granting ACD dispositions.

The third outcome analysis shows which arrested defendants were convicted of a crime or violation. Convictions were analyzed as a processing outcome and as a consequent of culpability and ACD outcomes. Defendants who received an ACD disposition were classified as not convicted.

The fourth outcome analysis shows which convicted defendants had their charges reduced. Disparities were measured by comparing seriousness levels of conviction and arrest charges. Because over 99 percent of all convictions resulted from guilty pleas, this analysis also measures disparities in plea bargaining.

The fifth outcome analysis shows which defendants were sentenced to jail or time served. The analysis included all arrested persons. The results reflect disparities in sentencing decisions as well as disparities in processing decisions that occurred before sentencing.

The sixth outcome analysis measures disparities in jail sentences. The analysis included for all arrested persons. Comparisons of the fifth and six outcome suggest how disparities in pretrial incarceration affected disparities in sentencing decisions.

² All analyses were limited to cases that had final dispositions. Cases that were transferred to other courts, that were consolidated with other arrests, or that were abated due to death or insanity of the defendant were excluded from analysis.

The last three analyses examine disparities in the type of sanction, the number of days sentenced to jail, and the amount of fines. These analyses were limited to defendants who were convicted but not sentenced to time served. Unlike the earlier analyses, controls were added for the seriousness of the conviction charges. These analyses are referred to as sentencing decisions to be consistent with other research. Even though Judges are ultimately responsible for making sentencing decisions disparities in sentencing decisions do not necessarily imply that judges treated minorities differently than whites. Disparities in sentencing decisions could also be due to disparities in plea or sentence bargains that were made between defendants, prosecuting attorneys, and defense attorneys before cases were presented to judges.

3. County Unit

Disparities were estimated within counties because earlier research (Nelson, 1991) showed that disparities in incarceration outcomes could not be accurately estimated using statewide data. Disparities were measured for each of the ten most populous counties and for the 52 least populous counties aggregated into one unit. There were not enough cases to perform the statistical analyses used in this report within the smallest counties. The inclusion of the aggregated county unit made it possible to combine county data into statewide data. Disparity in the aggregated unit represents average disparity. It does not necessarily represent disparity within any particular county.

The number and cumulative percentage of white and minority defendants who were arrested within each county are presented in Table 3. Black and Hispanic defendants were categorized as minority defendants. All other defendants were categorized as white defendants. The table shows that minority defendants were concentrated in the New York City Counties. Almost three-quarters of minority defendants who were arrested in 1985-1986 were arrested in New York City (New York, Kings, Bronx, and Queens Counties), whereas over three-quarters of the whites were arrested in other areas.³ Almost half of the whites but fewer than 10 percent of the minorities were arrested in the 52 smallest counties of the State.

Analyzing disparity at the county level controlled for differences in how defendants were processed within each county. No attempt was made to explain why some dispositions, like sentences to time served or adjournments in contemplation of dismissal, were used extensively in some counties but not others.

³The records for defendants processed in Richmond, the least populous county in New York City, were combined with records for defendants processed in the 51 least populous counties in the State.

TABLE 3: The Number and Percentage of Defendants by Minority Status and County, 1985-1986

County	Number		Percentage		Cumulative Percentage	
	White	Minority	White	Minority	White	Minority
New York	13,522	47,443	10%	36%	10%	36%
Kings	5,616	22,497	4%	17%	14%	53%
Bronx	2,174	15,911	2%	12%	15%	65%
Queens	5,100	10,534	4%	8%	19%	73%
Other 52	66,230	10,601	48%	8%	67%	81%
Erie	10,557	5,851	8%	4%	75%	85%
Westchester	5,891	5,557	4%	4%	79%	89%
Monroe	7,252	5,196	5%	4%	84%	93%
Nassau	7,559	4,476	5%	3%	90%	97%
Suffolk	9,647	2,999	7%	2%	97%	99%
Onondaga	4,247	1,398	3%	1%	100%	100%
NY State	137,795	132,463	100%	100%		

4. Arrest Charge

Characteristics of the offense, prior criminal record, conviction charge, and extent of evidence are frequently cited as the most important legal or legitimate influences affecting case processing. These influences are called legitimate because they have a basis in law and because persons believe they should affect case processing (Hagan and Bumiller, 1983). In contrast, race is an extra-legal or an illegitimate influence.

There is no basis in the criminal procedure law for using racial characteristics to affect case processing decisions. Furthermore, most persons believe that racial characteristics should not affect case processing decisions.⁴

⁴ Hagan and Bumiller argue that labeling variables as either legal or extra-legal influences is confusing because legal distinctions are ambiguous and even contradictory. For example, community ties are considered legally relevant variables for bail decisions but not for sentencing decisions.

Hagan and Bumiller replace the distinction between legal and extra-legal influences with the distinction between legitimate and illegitimate influences. Legitimate influences are those factors that persons believe should affect case processing, and illegitimate influences are those factors that persons believe should not affect case processing.

The most serious arrest charge based upon penal law was used to characterize the offense. Charge seriousness was measured by the maximum jail sentence allowed for each charge. When several charges had the same maximum sentence, charges for personal crimes were considered to be more serious than charges for property crimes. Arrests for DWI and prostitution charges were not included in the analysis.

There were 359 distinctly different arrest charges that could be identified as the most serious arrest charge. The charges were sorted by crime type and offense seriousness to define a smaller set of charges that were similar in character.

Ten types of crime were constructed by combining similar articles in New York State Penal Law Code. The crime types are presented in Table 4. They represent a compromise between defining a large number of crime types that distinguish similar types of crime but are hard to analyze, and defining a small number of crime types that ignore differences between crimes but are easy to analyze.

Misdemeanor arrests were classified into three seriousness levels: B, A6 and A12. Persons convicted of B misdemeanors could be sentenced to 3 months in jail. Persons convicted of A6 misdemeanors could be sentenced to 6 months in jail, and persons convicted of A12 misdemeanors could be sentenced to 12 months in jail.⁵

The most frequently occurring arrest charges are classified by crime type and seriousness level in Table 5. Only one percent of the arrest charges (2,733 out of 270,292) could not be classified into one of the seventeen combinations presented in this table.

⁵ The distinction between A6 and A12 misdemeanors is explicit in the Criminal Procedure Law. However, A12 and A6 charges are both referred to as A misdemeanor charges. The charges belonging to the A12 class are identified in the sentencing section of the Criminal Procedure Law.

TABLE 4: Crime Type by Article in NYS Penal Law

Crime Type	Articles in NYS Penal Law *
Burglary	140 Burglary
Drugs	220 Controlled Substances, 221 Marihuana
Escape & Misc	105 Conspiracy, 115 Criminal Facilitation, 100 Criminal Solicitation, 460 Enterprise Corruption, 205 Escape, 215 Judicial Proceedings
Fraud	180 Bribery, 200 Bribery of Officials, 185 Credit Fraud, 175 False Statements, 170 Forgery, 176 Insurance Fraud, 190 Other Fraud, 210 Perjury
Gambling	225 Gambling
Order	260 Children and Incompetents, 255 Marriage, 235 Obscenity, 195 Official Misconduct, 240 Public Order, 245 Public Sensibilities, 250 Right to Privacy
Personal	120 Assault, 135 Kidnapping and Coercion, 130 Sex Offenses
Property	145 Criminal Mischief
Theft	155 Larceny, 156 Offenses Involving Computers, 165 Theft, 275 Unauthorized Recording of Sound
Weapons	265 Firearms, 270 Public Safety

* The articles are identified by number and title.

TABLE 5: Most Frequently Occurring Arrest Charges Classified by Seriousness Level and Crime Type, New York State, 1985-1986

Seriousness Level Crime Type	Most Frequently Occurring Arrest Charges	Number of Defendants	Percentage
B Burglary	Criminal Trespass Other Charges	6,189 34	99% 1%
B Drugs	Possession Marihuana Other Charges	9,535 93	99% 1%
B Fraud	Issue Bad Check Other Charges	8,109 48	99% 1%
B Order	Criminal Nuisance Public Lewdness Alcohol Beverage Age Viol'n False Report False Alarm Other Charges	2,745 2,206 2,032 820 533 404	31% 25% 23% 9% 6% 5%
B Personal	Menacing Sexual Abuse Other Charges	3,689 1,036 190	75% 21% 4%
A6 Escape & Misc	Resisting Arrest Contempt Bail Jumping Escape Other Charges	12,949 1,233 221 179 303	87% 8% 1% 1% 2%
A6 Burglary	Criminal Trespass Possession Burglar Tools	4,562 3,190	59% 41%
A6 Drugs	Sale Marihuana Possession Hypodermic Instr. Possession Marihuana Other Charges	6,755 2,902 1,331 394	59% 25% 12% 5%
A6 Fraud	Criminal Impersonation Possession Forged Instr. False Written Statement Forgery Offer to File False Instr. Other Charges	2,844 562 354 297 166 274	61% 12% 8% 6% 4% 6%

TABLE 5: Most Frequently Occurring Arrest Charges Classified by Seriousness Level and Crime Type, New York State, 1985-1986

- continued -

Seriousness Level Crime Type	Most Frequently Occurring Arrest Charges	Number of Defendants	Percentage
A6 Order	Obstruct Governmental Adm.	4,381	90%
	False Alarm or Reporting	335	7%
	Other Charges	167	3%
A6 Property	Criminal Mischief	14,662	98%
	Criminal Tampering	319	2%
A6 Theft	Petit Larceny	54,288	64%
	Obtain Transit w/o Payment	14,229	17%
	Possession Stolen Property	7,546	9%
	Unauthorized Use Vehicle	2,621	3%
	Theft of Services	1,266	1%
	Invalid Use Credit Card	511	1%
	Other Charges	4,384	5%
A6 Gambling	Promote Gambling	1,429	40%
	Possession Gambling Device	1,572	44%
	Possession Gambling Records	566	16%
	Other Charges	2	0%
A12 Drugs	Possession Controlled Subst	32,587	100%
	Other Charges	2	0%
A12 Order	Aggravated Harassment	4,456	72%
	Injure or Endanger a Child	1,513	24%
	Riot	107	2%
	Other Charges	104	2%
A12 Personal	Assault	31,166	88%
	Reckless Endangerment	3,165	9%
	Sexual Abuse	578	2%
	Custodial Interference	179	1%
	Other Charges	359	1%
A12 Weapons	Criminal Possession Weapon	8,818	100%
	Other Charges	1	0%

The term "arrest charge" is used in the rest of the paper to refer to the seriousness level by crime type combinations presented in Table 5. These 17 arrest charges are detailed enough to control for differences in both the character and the seriousness of the offense. The names of several of these combinations were revised to more accurately reflect the most common arrest charge. The following revisions were made:

Seriousness Level and Crime Type in Table 5	Most Common Arrest Charge	Revised Arrest Charge Label
B Burglary	Criminal Trespass	B Trespass
B Drugs	Possession of Marihuana	B Marihuana
B Fraud	Issuance of Bad Checks	B Bad Check
A6 Burglary	Criminal Trespass or Possession of Burglar Tools	A6 Trespass/Tools
A6 Property	Criminal Mischief	A6 Mischief
A6 Escape & Misc	Resisting Arrest	A6 Resisting Arrest
A12 Drugs	Criminal Possession of a Controlled Substance	A12 Poss of a Ctld Subst

5. Prior Criminal Record

The arrests and convictions that occurred in the ten year period preceding the selected arrest were used to create a prior criminal record score. Scores ranged from zero (no prior arrests) to ten (two or more prior felony convictions). Felony convictions contribute more to the score than misdemeanor convictions, and misdemeanor convictions contribute more to the score than either felony or misdemeanor arrests. The variable is described by Nelson (1989).

Prior criminal history measures are frequently based solely upon convictions. Prior arrests were included in the score variable because they have been shown to influence incarceration decisions even when the number and seriousness of prior convictions are taken into account (Nelson, 1989).

6. Concurrent Felony Arrests

The prior record score measures criminal activity that occurred before the instant offense (the misdemeanor arrest studied here). It ignores criminal activity that followed the instant offense. It considers arrests that occurred up to ten years before the instant offense to be as important as arrests that occurred within weeks or months of the instant offense. This insensitivity to concurrent arrests could produce spurious relationships between minority status and processing outcomes. For example, if minorities were more likely than whites to be arrested for a felony crime following the instant offense, and if being arrested for a felony crime while being processed for a misdemeanor crime increased the chances of being sentenced to jail for the misdemeanor crime, then ignoring subsequent felony arrests could make minority status appear to be associated with incarceration.

An indicator of concurrent felony arrests was constructed by counting the number of felony arrests that occurred in preceding and succeeding periods. The preceding period was defined as the 6 month period before arrest. The succeeding period was defined as the lesser of the 6 month period following arrest and the time it took to dispose the case. The definition was limited to felony charges because it was believed that they were serious enough to affect the processing of pending misdemeanor arrest charges.

Even though the concurrent arrests indicator counted felony arrests that occurred before and after the instant offense, 85 percent of the concurrent arrests followed the offense. In other words, the concurrent arrest indicator primarily measured felony arrests that occurred following the offense studied here. This unusual split was largely due to the sampling scheme.⁶

III. Preliminary Observations

Relationships between arrest charge, prior criminal record, concurrent felony arrests, gender, age, minority status, and county are presented in Appendix A. The relationships were used to guide the selection of variables for the statistical models. The most important relationships are summarized below.

- Arrest charges differed by county. The New York City counties were characterized by drug charges whereas the other counties were characterized by criminal mischief, fraud, and order charges.

⁶ By definition, defendants whose first arrest in 1985 or 1986 occurred after July 1, 1985 could not have been arrested in the 6 month period preceding the instant offense. Hence, all of their concurrent arrests occurred after the instant offense.

- The seriousness classification of the arrest charges differed by county. The average case analyzed in the New York City counties was more serious than the average case analyzed in other counties.
- The distribution of arrest charges differed by minority status. In most counties, minorities were arrested for A6 drug charges more often than whites. Whites were arrested for B order, B bad check, A6 mischief, and A12 order charges more often than minorities.
- Minorities had more extensive criminal records than whites. A greater proportion of minorities had prior arrest records. Among defendants with arrest records, the average criminal record score for minorities exceeded the average criminal record score for whites.
- A greater proportion of minorities had concurrent felony arrests. The differences varied by county.
- Whites and minorities had similar age distributions but slightly different gender distributions. Minorities had a greater proportion of females arrested for gambling, B bad check, B personal, A12 personal, A6 mischief, A12 weapons, and A12 order charges. Whites had a greater proportion of females arrested for B marihuana, A6 drug, B trespass, A6 trespass/tools, A6 fraud, and A6 theft charges.

IV. Statistical Models of Processing Outcomes

Logit models were used to control for differences in arrest charges, prior criminal records, concurrent felony arrests, and county of jurisdiction. A total of 82 variables were used to describe each processing outcome. Additional variables were used to describe sentencing decisions. Arrest charges were coded as indicator variables. For example, defendants arrested for A6 drug charges were given a value of one on the A6 drug indicator variable and a value of zero on the other arrest charge indicators. Sixteen indicator variables were needed to estimate the effects for 17 arrest charges. The effect of the 17th arrest charge was estimated by the intercept term in the model.

Prior criminal record was measured in two ways. First, an indicator variable was used to estimate the impact of having been arrested at least one time in the ten year period preceding the instant offense. Persons with a prior arrest were given the value 1 and persons without a prior arrest were given the value 0. Separate coefficients were estimated for each county. These allowed the effect of having a prior arrest to differ by county. For example, defendants with arrest records could be more harshly sanctioned than defendants without arrest records in some but not in all counties.

Second, the prior record score variable was treated as a continuous level variable.⁷ Separate coefficients were estimated for each county. These coefficients allowed the effect that the seriousness of the prior record had on processing outcomes to differ by county.

The number of concurrent felony arrests were coded into three levels: zero, one, and two or more. This coded variable was treated as a continuous variable. Separate coefficients were estimated for each county. These coefficients allowed the effect of concurrent felony arrests to differ by county.

Indicator variables were used to adjust for differences in how defendants were processed in different counties. For example, these variables adjusted for the fact that ACDs were frequently used in Monroe County but seldom used in Nassau County. No attempt was made to explain why dispositions varied by county.⁸

Two indicator variables were used to measure disparities within each county. One variable measured disparities for defendants with arrest records, and one measured disparities for defendants without arrest records. In total, 22 variables were used to estimate disparities in each model. The variables were coded one for minorities and zero for whites. They measured the extent to which minorities and whites who were arrested for similar charges, who had similar prior criminal records, and who had similar concurrent felony arrests, received the same dispositions within each county.

The models were estimated from tables whose cells contained the number of defendants who had the same value on all combinations of arrest charge, prior record score, concurrent felony arrest, minority status, and county variables. Each cell contained the number of defendants who received and the number who did not receive each disposition. There were a total of 5,610 possible cells in each table.

Cells that contained fewer than five cases were excluded from most analyses. The statistical software (SPSSX) was unable to estimate coefficients when the tables were based upon all cells in the data set.

⁷ The variable was collapsed from eleven to five scale values to decrease the number of combinations of cells that had to be analyzed at one time.

⁸ Only ten indicator variables were needed to measure differences in processing styles across the 11 county units. The tendency to use any particular style in the 11th county was estimated from the intercept term in the model.

Age and gender were not used as control variables. Had they been included, other variables would have had to be simplified or excluded from the models. Dropping age was not expected to affect the estimation of disparity because the age distributions of minorities and whites were similar in all counties. Ignoring gender may have affected the estimates.⁹ Biases introduced by ignoring gender were expected to be small because relatively few females were arrested for most charges.

A. Culpable Defendants

The analysis began by modeling how arrest charges, prior criminal records, concurrent felony arrests, county of jurisdiction, and minority status affected whether defendants were disposed as if they had committed a culpable act. Defendants were defined as "culpable" if they were convicted of some crime or if they received an adjournment in contemplation of dismissal disposition. All other defendants were defined as "not culpable." Almost all (98.1%) of these defendants had their cases dismissed. A few (1.9%) had their cases acquitted.¹⁰

Culpability does not necessarily refer to the defendant's actions. It refers to how the criminal justice system viewed the defendant's actions.

The interpretation that an ACD disposition represents a culpable disposition has no legal basis. For all but marihuana charges, an ACD is neither a conviction nor an admission of guilt. It is an agreement between the judge, district attorney, and the defendant specifying that if the defendant agrees to behave, to provide community service, to receive counseling, to pay restitution, etc., then the prosecution of the case will be adjourned. If the defendant meets the conditions in a specified period of time, then the case will be dismissed. ACD agreements are based upon 6 month periods for all but drug charges. They can be based upon 12 month periods for drug charges.

⁹ The direction of the impact of excluding gender in estimating disparities can be derived from Table A8 by assuming that females were treated more leniently than males, and that whites were treated more leniently than minorities. In this case, disparities would be underestimated for crimes listed in Table A8 that had a higher proportion of females among minority defendants than among white defendants (A6 gambling, B bad check, B personal, A12 personal, A6 mischief, A12 possession of weapons and A12 order charges) because a tendency to treat minorities more harshly than whites would be partially cancelled by a tendency to treat females more leniently than males. In a similar manner, disparities would be overestimated for crimes listed in Table A8 that had a higher proportion of females among white defendants than among minority defendants (B trespass, A6 trespass/tools, B marihuana, A6 drugs, A6 theft, and A6 fraud charges) because a tendency to treat minorities more harshly than whites would be exaggerated by a tendency to treat females more leniently than males.

¹⁰ Youthful offender dispositions were classified as convictions.

ACDs resemble admissions of guilt for marihuana charges because defendants with a previous ACD for marihuana charges cannot be granted a second ACD for marihuana charges. If ACDs were not implicit admissions of guilt, why would the penal law restrict defendants to only one ACD?

ACDs were labeled culpable dispositions because they resemble conditional discharges and probation sentences. It is hard to imagine when the court would prefer to dispose an innocent defendant with an ACD rather than with a case dismissal.

The percentages and the modeled percentages of whites and minorities who were disposed as culpable defendants are classified by arrest record and county in Table 6. The model described the odds of being processed as a culpable defendant given arrest. Relatively large differences between whites and minorities were observed in some counties. In Erie, Suffolk, and Monroe Counties, whites were more likely than minorities to be disposed as culpable defendants. In Bronx County, minorities without arrest records were more likely than whites without arrest records to be disposed as culpable defendants.

Differences in the observed percentages of whites and minorities partially control for differences in prior criminal records and county of processing. They do not control for differences in arrest charges, the seriousness of prior criminal records, the number of concurrent felony arrests, or for variables that affected case processing but that were not measured in the present study.

TABLE 6: Observed and Modeled Percentage of Defendants Who Were Processed as Culpable Defendants by Minority Status, Prior Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	Logit Parameter	Effect* Is to ACD or Convict:
	White (W)	Minority				
No Prior Arrests						
Bronx	70%	78%	76%	5%	.26	Minorities
Kings	83%	84%	84%	0%	.03	
New York	78%	79%	79%	1%	.06	
Queens	76%	78%	76%	0%	.02	
Onondaga	86%	85%	84%	-1%	-.11	
Westchester	82%	82%	81%	-1%	-.07	
Other 52	84%	83%	84%	-0%	-.03	
Nassau	95%	95%	95%	-0%	-.07	Whites
Suffolk	87%	84%	85%	-3%	-.21	
Erie	75%	68%	66%	-9%	-.43	
Monroe	84%	72%	74%	-11%	-.65	
NY State	83%	80%				
At Least One Prior Arrest						
Bronx	80%	79%	79%	-1%	-.04	Whites
Kings	90%	91%	91%	1%	.10	
New York	81%	80%	81%	0%	.01	
Queens	78%	78%	76%	-2%	-.10	
Onondaga	82%	83%	82%	0%	.01	
Westchester	82%	84%	81%	-1%	-.05	
Other 52	84%	81%	82%	-2%	-.11	
Nassau	90%	89%	88%	-2%	-.21	
Suffolk	81%	72%	73%	-7%	-.42	
Erie	75%	63%	60%	-14%	-.66	
Monroe	68%	57%	57%	-12%	-.50	
NY State	82%	80%				

Pearson Chi Square: 6,788 on 2,040 Degrees of Freedom

*Only statistically significant effects are labeled. The minority status labels can be switched to interpret the results in terms of case dismissals.

1. Logit Parameters and Disparity Percentages

The logit parameters in Table 6 measure disparities in processing that are not due to differences in arrest charges, prior criminal records, concurrent felony arrests, or county of processing. They could, of course, be affected by unmeasured variables. Values of zero indicate that minorities and whites were treated in the same manner. Values greater than zero indicate that minorities were more likely than whites to be disposed as culpable defendants, and values less than zero indicate the converse. Ignoring sign, larger values indicate stronger associations between minority status and being disposed as a culpable defendant.¹¹

The final column of Table 6 shows which logit parameters differed from zero at the .05 level of significance. The labels indicate whether minorities or whites were more apt to be disposed as culpable defendants. A label indicates that the logit parameter was significantly different from zero. Most of the significant relationships in Table 6 occurred in Monroe, Erie, and Suffolk Counties.

The relationships between minority status and processing decisions measured by logit parameters do not depend upon the overall probability of the disposition. This makes it possible to analyze relationships for commonly occurring dispositions (like convictions) and rarely occurring dispositions (like sentences to jail) with the same parameters. The parameters are especially useful for indicating the sign and the statistical significance of each relationship. However, they are not necessarily useful for indicating the substantive importance of a relationship.

The substantive importance of each logit parameter was evaluated by using the logit parameter and the observed percentage of whites to estimate the "excess" percentage of minorities who would be disposed in particular ways once differences in arrest charges, prior criminal history scores, concurrent felony arrests, and county of jurisdiction were taken into account. Excesses were calculated by subtracting the observed percentage of whites from the modeled percentage of minorities. Positive excesses identify dispositions that occurred "too frequently" to minorities, and negative excesses identify dispositions that occurred "too infrequently" to minorities.

¹¹ The parameters describing the relationship between minority status and processing decisions are referred to as "logit parameters" in this paper. This use ignores many of the logit parameters estimated in each model. For example, the current model contains 83 parameters (one for each of 82 variables and one for an intercept term), only 22 of which describe the relationship between minority status and being a culpable defendant. The parameters that do not involve minority status are ignored in this report.

The logit parameters in this paper equal the logarithm of the logit parameters presented in Nelson (1991).

For example, consider defendants without prior arrest records in Bronx County. The logit parameter describing the relationship between culpability and minority status equaled .2648. The percentages of minorities that would be disposed as culpable defendants for observed percentages of whites ranging from 1 to 99 percent are presented in Table 7. These percentages are called modeled percentages. Their calculation is described in Appendix B.

TABLE 7: Observed, Modeled, and Disparity Percentages Based Upon A Logit Parameter of .2648

Observed Percentage of Whites (W)	Modeled Percentage of Minorities (M)	Disparity Percentage (M-W)
1.0%	1.3%	0.3%
5.0%	6.4%	1.4%
10.0%	12.6%	2.6%
30.0%	35.8%	5.8%
50.0%	56.6%	6.6%
70.0%	75.3%	5.3%
90.0%	92.1%	2.1%
95.0%	96.1%	1.1%
99.0%	99.2%	.2%

The modeled percentages show the percentage of minorities that would be disposed as culpable defendants if they had the same characteristics as whites. For example, if 50 percent of the whites who were arrested for B bad check charges, who had prior record scores of 2, and who had no concurrent felony arrests, were disposed as culpable defendants, then 56.6 percent of the minorities having these same characteristics would be disposed as culpable defendants. The difference in percentages, 6.6, is labeled the disparity percentage, hereafter called the DP. It represents the "excess" percentage of minorities who were disposed as culpable defendants.

In contrast, suppose that 95 percent of the whites who were arrested for A12 personal crimes, who had prior record scores of 8, and who had one concurrent felony arrest, were disposed as culpable defendants. In this case, 96.1 percent of the minorities having these characteristics would be disposed as culpable defendants. The DP would equal 1.1 percent. It would be smaller than the former DP even though both were calculated from the same logit parameter describing the association between minority status and culpable dispositions.

In general, the size of the DP depends upon the percentage of whites who received the disposition and the size of the logit parameter. The disparity percentage equals zero whenever the logit parameter equals zero. It exceeds zero whenever the logit parameter exceeds zero, and it is less than zero whenever the logit parameter is less than zero.¹²

The modeled percentages of minorities are presented in the 4th column of Table 6 and the DPs are presented in the 5th column. Many of the DPs are close to zero showing that whites and minorities were processed in a similar manner. Among defendants without prior arrest records, whites were disposed with culpable disposition more often than minorities in Suffolk, Erie, and Monroe Counties (DPs = -3, -9, and -11, respectively) and minorities were disposed with culpable dispositions more often than whites in Bronx County (DP = 5). Among defendants with prior records, whites were disposed with culpable dispositions more often than minorities in the Other 52, Suffolk, Erie, and Monroe Counties (DPs = -2, -7, -14, and -12, respectively).

In general, most of the significant DPs occurred in Suffolk, Erie, and Monroe Counties. In these counties, minorities had their cases dismissed more often than comparably situated whites.

The counties in Table 6 and in subsequent tables are ordered by size of a logit parameter that was estimated in a model that used only one logit parameter to describe disparities within each county. These models are not discussed in the text of the paper because they did not describe disparities as well as models that used separate parameters for defendants with and without prior arrest records.

Analyses of racial disparity have frequently estimated disparities by comparing statewide percentages for whites and blacks. Statewide percentages are presented with most analyses to demonstrate that statewide patterns do not necessarily reflect county level patterns. For example, the observed percentages based upon statewide data in Table 6 show that minorities and whites were equally likely to be treated as culpable defendants. These percentages conceal differences observed in Suffolk, Erie, and Monroe Counties.

¹²The DP is largest when the proportion of whites who received the disposition equals $(\sqrt{x}-1)/(x-1)$, where $x=\exp(\text{logit parameter})$, and where the logit parameter does not equal zero. For a logit parameter of .2648, the DP would be largest when 46.7% of the whites received the disposition.

The Pearson chi square statistic and its degrees of freedom are listed at the bottom of the table. These statistics are presented to enable researchers to evaluate how well the logit models described the data.¹³

B. ACD Dispositions

Culpable defendants could have been processed in two very different ways. They could have been convicted of a criminal offense or they could have had their case adjourned in contemplation of dismissal. This section shows which culpable defendants received ACDs. These dispositions are real breaks; they usually result in the charges against the defendant being dismissed.

The observed and modeled percentages of white and minority defendants who were granted ACD dispositions are categorized by prior arrest record and county in Table 8. The model described the odds of receiving an ACD for defendants who were processed as culpable defendants.¹⁴

Table 8 shows that ACD dispositions depended upon the county of jurisdiction and the defendant's prior arrest record. For example, consider what happened to white defendants in Monroe and New York Counties. In Monroe County, 73 percent without prior arrest records but 43 percent with prior arrest records were granted ACD dispositions. In contrast, 31 percent without prior arrest records but only 6 percent with prior arrest records were granted ACD dispositions in New York County. In every county, the chances of getting an ACD were considerably higher for defendants without than for defendants with arrest records.

¹³ Chi square statistics are frequently compared to their degrees of freedom to evaluate how well statistical models describe data. Models are considered to provide good descriptions of data when their chi square test statistics are about equal to their degrees of freedom. They are considered to provide poor descriptions when their chi square statistics are considerably larger than their degrees of freedom.

It is difficult to evaluate how well the logit models described the data in this paper because the analyses were based upon extremely large data sets. The problem with interpreting chi square statistics based upon large data sets is that the chi square statistic is linearly related to the number of cases.

The difficulty of interpreting the chi square statistics in this report can be illustrated by asking what would happen to the chi square statistic if the analyses had been based upon fewer cases. For example, the chi square value of 6,788 in Table 6 was based upon 267,547 cases. If the observed data were scaled to 80,406 cases, then the chi square test statistic would be scaled to 2,040, its degrees of freedom. Most researchers would be pleased to estimate a model whose chi square statistic was no larger than its degrees of freedom when analyzing 80,000 cases.

¹⁴ The percentages underestimate the percentage of defendants who were offered ACD dispositions because the CCH/OBTS data base does not record ACD agreements that were withdrawn before the cases were dismissed.

TABLE 8: Observed and Modeled Percentage of Culpable Defendants Whose Cases Were Adjudged in Contemplation of Dismissal by Minority Status, Prior Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage	Disparity Percentage	Logit Parameter	Effect* Is to ACD
	White (W)	Minority	Minority (M)	(M - W)		
No Prior Arrests						
Other 52	41%	43%	43%	2%	.07	
Bronx	38%	39%	37%	-2%	-.08	
Monroe	73%	73%	73%	-0%	-.02	
Nassau	18%	17%	16%	-2%	-.13	
Kings	61%	61%	59%	-2%	-.07	
Queens	40%	38%	37%	-3%	-.13	Whites
Erie	44%	43%	43%	-1%	-.06	
New York	31%	30%	26%	-5%	-.26	Whites
Onondaga	75%	72%	72%	-3%	-.14	
Suffolk	46%	32%	36%	-10%	-.41	Whites
Westchester	55%	43%	43%	-13%	-.51	Whites
NY State	43%	41%				
At Least One Prior Arrest						
Other 52	22%	21%	23%	1%	.04	
Bronx	8%	10%	10%	3%	.32	
Monroe	43%	38%	42%	-1%	-.04	
Nassau	7%	7%	8%	0%	.05	
Kings	25%	23%	21%	-3%	-.18	Whites
Queens	11%	9%	9%	-2%	-.22	
Erie	23%	16%	17%	-6%	-.35	Whites
New York	6%	6%	7%	0%	.02	
Onondaga	40%	29%	30%	-9%	-.42	Whites
Suffolk	13%	8%	8%	-5%	-.54	Whites
Westchester	7%	4%	5%	-2%	-.42	Whites
NY State	20%	12%				

Pearson Chi Square: 10,976 on 1,837 Degrees of Freedom

*Only statistically significant effects are labeled.

The relationship between minority status and ACD dispositions depended upon prior arrest records. For defendants without arrest records, whites received ACD dispositions significantly more often than comparably situated minorities in Queens, New York, Suffolk, and Westchester Counties (DPs = -3, -5, -10, -13, respectively). For defendants with arrest records, whites received ACD dispositions more often than minorities in Kings, Erie, Onondaga, Suffolk, and Westchester Counties (DPs = -3, -6, -9, -5, -2, respectively). The DPs for defendants with arrest records were much smaller than the DPs for defendants without arrest records in Suffolk and Westchester Counties because relatively few defendants with prior arrests received ACD dispositions.

In summary, ACD dispositions were more closely related to arrest record and county than to minority status. In most counties, minorities received ACD dispositions less often than comparably situated whites. The largest DPs occurred in Westchester, Suffolk, and Onondaga Counties.

The statewide percentages presented in Table 8 provide a poor summary of how minority status was related to ACD dispositions. They underestimate differences for defendants without arrest records and overestimate differences for defendants with arrest records.

C. Convictions

Disparities in convictions were analyzed for all arrested persons. Most of the cases that were not convicted were dismissed following arraignment (55.6%), dismissed by an ACD agreement (42.3%), or acquitted (2.1%).

The observed and modeled percentages of white and minority defendants who were convicted are categorized by prior arrest record and county in Table 9. The model described the odds of being convicted given arrest. The table shows that conviction was primarily related to arrest records. Defendants with arrest records were much more likely than defendants without arrest records to be convicted.

TABLE 9: Observed and Modeled Percentage of Defendants Who Were Convicted by Minority Status, Prior Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	Logit Parameter	Effect* Is to Convict:
	White (W)	Minority				
No Prior Arrests						
Westchester	37%	47%	46%	10%	.40	Minorities
Onondaga	22%	24%	24%	2%	.11	
New York	54%	56%	59%	5%	.20	
Kings	32%	33%	34%	1%	.06	Minorities
Suffolk	47%	57%	55%	7%	.29	
Bronx	43%	48%	47%	4%	.16	
Queens	46%	49%	48%	2%	.09	Whites
Nassau	78%	79%	79%	1%	.06	
Other 52	50%	47%	48%	-1%	-.05	
Monroe	22%	19%	20%	-2%	-.14	Whites
Erie	42%	39%	38%	-4%	-.16	
NY State	47%	47%				
At Least One Prior Arrest						
Westchester	77%	80%	77%	1%	.05	Minorities
Onondaga	49%	59%	57%	8%	.32	
New York	75%	75%	78%	2%	.13	
Kings	68%	70%	72%	4%	.19	Whites
Suffolk	70%	67%	67%	-2%	-.11	
Bronx	73%	71%	73%	-1%	-.05	
Queens	69%	70%	70%	1%	.04	Whites
Nassau	83%	82%	81%	-2%	-.15	
Other 52	65%	64%	63%	-2%	-.08	
Monroe	39%	35%	33%	-6%	-.25	Whites
Erie	57%	53%	50%	-8%	-.31	
NY State	66%	70%				

Pearson Chi Square: 11,333 on 2,053 Degrees of Freedom

*Only statistically significant effects are labeled.

Disparities in conviction outcomes occurred in about half of the counties. Among defendants without prior arrest records, minorities were convicted more often than comparably situated whites in Westchester, New York, Suffolk, and Bronx Counties (DPs = 10, 5, 7, and 4, respectively), and whites were convicted more often than minorities in Erie (DP = -4). Among defendants with prior arrest records, minorities were convicted more often than whites in Onondaga, New York and Kings Counties (DPs = 8, 2, and 4, respectively) and whites were convicted more often than minorities in the Other 52, Monroe, and Erie Counties (DPs = -2, -6, and -8, respectively).

In general, the logit parameters were relatively small and inconsistent in most counties. Only Erie and New York Counties exhibited significant parameters for defendants with and without arrest records. In Erie County, minorities were convicted less often than whites. In New York County, minorities were convicted more often than whites.

The inconsistency in the size of the logit parameters in the same county, combined with the relatively small size of the logit parameters, suggests that whites and minorities had similar chances of being convicted. Most of the significant differences can be explained by disparities involving culpability and ACD disposition outcomes. These interrelationships are discussed later.

D. Charge Reductions

The sanctions that can be applied to convicted defendants depend upon the seriousness of the conviction charges. In most cases, the seriousness level of the most serious conviction charge was lower than the seriousness level of the most serious arrest charge. A12 charges could be reduced to A6 or B charges, and A6 charges could be reduced to B charges. All charges could be reduced to violations or infractions. Indeed, 63 percent of all convictions were for violations or infractions.¹⁵

Disparities in charge reductions were modeled by asking which convicted defendants did not get their charges reduced. The observed and modeled percentages of white and minority defendants who did not get their most serious charge reduced are classified by county in Table 10. Because over 99 percent of all convictions resulted from guilty pleas, this analysis also measures disparities in plea bargaining.

¹⁵ At least 59 percent of the defendants who were convicted and who had been arrested for all but A6 fraud, A6 marihuana, and A6 gambling charges were convicted of violation or infraction offenses. The percentages for those crimes equalled 39, 47, and 49 percent, respectively.

TABLE 10: Observed and Modeled Percentage of Defendants Who Were Convicted Without a Charge Reduction by Minority Status, Prior Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage	Disparity Percentage	Logit Parameter	Effect* Is to Not Reduce Charges for:
	White (W)	Minority	Minority (M)	(M - W)		
No Prior Arrests						
Suffolk	4%	7%	7%	3%	.59	Minorities
Kings	3%	2%	2%	-1%	-.63	Whites
Westchester	11%	15%	14%	3%	.28	Minorities
Nassau	4%	5%	5%	0%	.08	
Onondaga	40%	35%	33%	-6%	-.27	
New York	3%	3%	3%	1%	.21	
Bronx	6%	6%	5%	-1%	-.13	
Monroe	11%	10%	10%	-1%	-.10	
Queens	5%	3%	2%	-3%	-.75	Whites
Erie	5%	3%	3%	-1%	-.33	
Other 52	38%	31%	32%	-5%	-.24	Whites
NY State	21%	7%				
At Least One Prior Arrest						
Suffolk	20%	32%	27%	7%	.42	Minorities
Kings	6%	13%	12%	6%	.76	Minorities
Westchester	28%	42%	39%	11%	.49	Minorities
Nassau	26%	42%	34%	8%	.39	Minorities
Onondaga	36%	51%	50%	14%	.56	Minorities
New York	40%	50%	44%	4%	.18	Minorities
Bronx	27%	35%	31%	5%	.22	
Monroe	18%	20%	19%	1%	.05	
Queens	11%	14%	13%	3%	.26	Minorities
Erie	8%	10%	7%	-1%	-.11	
Other 52	51%	48%	46%	-4%	-.17	Whites
NY State	36%	37%				

Pearson Chi Square: 4,571 on 1,622 Degrees of Freedom

*Only statistically significant effects are labeled.

Among defendants without arrest records, charge reduction DPs were relatively small suggesting that whites and minorities had similar chances of having their charges reduced. Minorities were convicted of unreduced arrest charges more often than whites in Suffolk and Westchester counties (DPs = 3, 3) and whites were convicted of unreduced arrest charges more often than minorities in Kings, Queens, and the Other 52 Counties (DPs = -1, -3, and -5, respectively). Among defendants with arrest records, DPs were larger, suggesting that minorities were convicted of unreduced arrest charges more often than whites in many counties. Minorities were convicted of unreduced arrest charges significantly more often than whites in seven counties (DPs ranged from 3 to 14) and whites were convicted of unreduced arrest charges significantly more often than minorities in the 52 county unit (DP = -4).

The statewide DPs showed a different and misleading pattern. Among defendants without arrest records, the statewide data show that whites were more likely than minorities to be convicted of unreduced arrest charges. This pattern arose because plea bargaining was extensively used in all but Onondaga and the 52 county unit. Over half of all whites were processed in these counties. The statewide percentages reflected the lack of plea bargaining in these counties and the extensive use of plea bargaining in New York City.

In summary, disparities in charge reductions depended upon prior criminal records. For defendants arrested for the first time, minorities had their charges reduced about as often as whites. For defendants with prior arrests, minorities had their charges reduced less often than comparably situated whites.

E. Incarcerations

Two approaches were used to measure disparities in incarceration outcomes given arrest. One defined incarceration as a sentence to jail or time served. The other defined incarceration as a sentence to jail. Both definitions show that minorities were incarcerated more often than whites. The analysis based upon jail and time served sentences was more powerful at uncovering disparities than the analysis based solely on jail sentences.

1. Jail and Time Served Outcomes

Defendants can be incarcerated before trial and following sentencing. The pretrial period includes the time from arrest to arraignment, and from arraignment until final disposition. The pretrial period could more accurately be called the pre-final disposition period because fewer than one-half of one percent of the defendants actually went to trial. Nevertheless, it is referred to as the pretrial period to be consistent with common usage.

Pretrial incarcerations occur when defendants are not released on desk appearance tickets before arraignment, and when they are not released on recognizance or bail following arraignment. Time spent in jail before sentencing must be credited toward sentenced time.

Pretrial incarcerations were not recorded in the CCH/OBTS data set. They were inferred from sentences of time served. These sentences were presumably given to defendants whose sentenced time was offset by the time already spent in jail. Other than a dismissal, this is one of the least severe outcomes possible for a convicted defendant who was held in jail while his/her case was processed.

In the following analysis, defendants were considered to have been incarcerated if they were sentenced to jail or to time served. This definition underestimates incarceration because some defendants spent time in jail but were not sentenced to jail or time served. The extent of the underestimation is unknown.

The observed and modeled percentage of white and minority defendants who were sentenced to jail or time served is classified by county in Table 11. The model describes the odds of being incarcerated given arrest. The table demonstrates that minorities were incarcerated more often than comparably situated whites; the disparities were statistically significant in every county. Among defendants without prior arrest records, the DPs were relatively small (they ranged from 1 to 4) because few of these defendants were incarcerated. Among defendants with prior arrest records, the DPs ranged from 8 to 20 in Queens, Westchester, Nassau, Bronx, Kings, Suffolk, the Other 52, and New York Counties (DPs = 20, 19, 19, 16, 15, 11, 8, 8, respectively) and ranged from 2 to 4 in Onondaga, Erie, and Monroe Counties (DPs = 4, 4, 2, respectively).

Even though the largest DPs only occurred to defendants who had arrest records, the largest logit parameters did not necessarily occur to defendants who had arrest records. In fact, the logit parameters for defendants with prior arrest records were similar in size to the logit parameters for defendants without arrest records. In other words, the DPs for defendants without arrest records were small because relatively few of these defendants were incarcerated.

TABLE 11: Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail or Time Served by Minority Status, Prior Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	Logit Parameter	Effect* Is to Incarcerate
	White (W)	Minority				
No Prior Arrests						
Westchester	1%	4%	4%	3%	1.33	Minorities
Queens	2%	6%	5%	3%	.98	Minorities
Nassau	1%	2%	2%	1%	.88	Minorities
Suffolk	1%	6%	5%	4%	1.93	Minorities
Kings	2%	4%	4%	2%	.79	Minorities
Bronx	3%	7%	7%	4%	.76	Minorities
Other 52	3%	6%	6%	3%	.85	Minorities
Onondaga	1%	3%	3%	2%	.99	Minorities
Erie	2%	4%	4%	2%	.61	Minorities
Monroe	1%	2%	2%	1%	.54	Minorities
New York	19%	22%	22%	3%	.15	Minorities
NY State	4%	11%				
At Least One Prior Arrest						
Westchester	12%	35%	31%	19%	1.22	Minorities
Queens	14%	33%	34%	20%	1.18	Minorities
Nassau	15%	40%	34%	19%	1.04	Minorities
Suffolk	12%	27%	22%	11%	.80	Minorities
Kings	12%	25%	26%	15%	.99	Minorities
Bronx	17%	33%	33%	16%	.88	Minorities
Other 52	12%	24%	20%	8%	.61	Minorities
Onondaga	9%	16%	13%	4%	.43	Minorities
Erie	10%	17%	14%	4%	.36	Minorities
Monroe	6%	11%	9%	2%	.35	Minorities
New York	35%	43%	43%	8%	.34	Minorities
NY State	14%	33%				

Pearson Chi Square: 5,747 on 2,041 Degrees of Freedom

*All effects were statistically significant.

In summary, even though minority status was not closely linked to conviction, it was closely linked to incarceration. Even after controlling for differences in arrest charges, prior criminal records, concurrent felony arrests, and county of jurisdiction, minorities were sentenced to jail or time served much more often than whites. In several counties, up to 20 percent of the incarcerated minorities with prior arrest records would not have been incarcerated had they been processed as whites.

The observed percentages based upon statewide data in Table 11 overestimate differences between whites and minorities in most counties. Among defendants with prior arrest records, observed percentage differences show that minorities were 19 percent more likely to be incarcerated than whites. Yet, DPs of this size were observed in only three counties. Among defendants without prior arrest records, observed percentage differences show that minorities were 7 percent more likely to be incarcerated. DPs of this size were not found in any county.

2. Jail Outcomes

The finding that minorities with prior arrest records were sentenced to jail or time served more often than comparably charged whites is difficult to interpret because sentences to time served could reflect differences in failing to appear for court hearings. Defendants with outstanding warrants and histories of not appearing for trial are especially likely to be incarcerated before disposition. Incarceration of these defendants does not necessarily represent disparities in case processing.

If disparities measured in the model of sentences to jail or time served for defendants with prior arrests were primarily due to unmeasured differences in failing to appear for court hearings, then considerably less disparity should be found in the analysis of who was actually sentenced to jail. In fact, minorities could appear to be sentenced to jail less often than comparably charged whites if many of them were not sentenced to jail because they had spent time in jail while their cases were processed.

The percentage of white and minority defendants who were sentenced to jail is classified by prior record and county in Table 12. The model describes the odds of being sentenced to jail given arrest. The table shows that both arrest record and minority status were important determinants of jail sentences. Among defendants without prior arrest records, minorities were incarcerated significantly more often than whites in seven counties (DPs ranged from 1 to 2). Among defendants with arrest records, minorities were incarcerated significantly more often than whites in nine counties (DPs ranged from 2 to 16).

TABLE 12: Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail by Minority Status, Prior Record and County, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	Logit Parameter	Effect* Is to Incarcerate
	White (W)	Minority				
No Prior Arrests						
Westchester	1%	2%	2%	2%	1.31	Minorities
Queens	1%	3%	2%	2%	1.22	Minorities
Bronx	1%	2%	2%	1%	1.19	Minorities
Kings	1%	2%	2%	1%	.74	Minorities
Nassau	0%	1%	1%	0%	.59	
Suffolk	0%	2%	2%	1%	1.41	Minorities
Other 52	2%	4%	4%	2%	.64	Minorities
New York	0%	1%	1%	1%	.97	Minorities
Onondaga	0%	0%	0%	-0%	-.05	
Erie	0%	0%	0%	0%	.03	
Monroe	1%	1%	1%	0%	.39	
NY State	1%	2%				
At Least One Prior Arrest						
Westchester	11%	29%	26%	16%	1.10	Minorities
Queens	10%	24%	24%	15%	1.10	Minorities
Bronx	10%	23%	21%	11%	.89	Minorities
Kings	8%	19%	18%	10%	.93	Minorities
Nassau	12%	30%	22%	10%	.76	Minorities
Suffolk	9%	19%	14%	5%	.55	Minorities
Other 52	10%	19%	15%	6%	.51	Minorities
New York	10%	18%	15%	5%	.44	Minorities
Onondaga	7%	11%	10%	3%	.37	
Erie	6%	10%	8%	2%	.34	Minorities
Monroe	5%	8%	6%	1%	.16	
NY State	9%	19%				

Pearson Chi Square: 3,423 on 2,041 Degrees of Freedom

*Only statistically significant effects are labeled.

The analysis of sentences to jail or time served and the analysis of sentences to jail both demonstrate that minorities were incarcerated more often than comparably situated whites. Differences in these two analyses are described in the following section.

3. Defining Time Served as an Incarceration Outcome

Published research on incarceration has defined incarceration as a sentence to jail or prison. It has not, to my knowledge, typically included time served as an incarceration sentence. The effect of defining time served as an incarceration sentence is reviewed in this section.

The percentage of defendants who were sentenced to time served are classified by county, prior arrest record, and minority status in Table 13. The table shows that time served sentences were mostly used in the New York City area, especially in New York County. Among defendants without arrest records, 20 percent of the defendants in New York County but only 1 percent of the defendants in the rest of the State were sentenced to time served. Among defendants with arrest records, the percentages equalled 25 and 4 percent, respectively.

The percentages of sentences to jail or time served that were due to time served sentences are also presented in Table 13. These percentages show that time served sentences were primarily used for defendants who did not have arrest records. Among defendants without arrest records who were sentenced to jail or time served, 96 percent of the defendants in New York County and 51 percent of the defendants in the rest of the State were sentenced to time served. Among defendants with arrest records, the percentages equalled 62 and 25 percent, respectively.

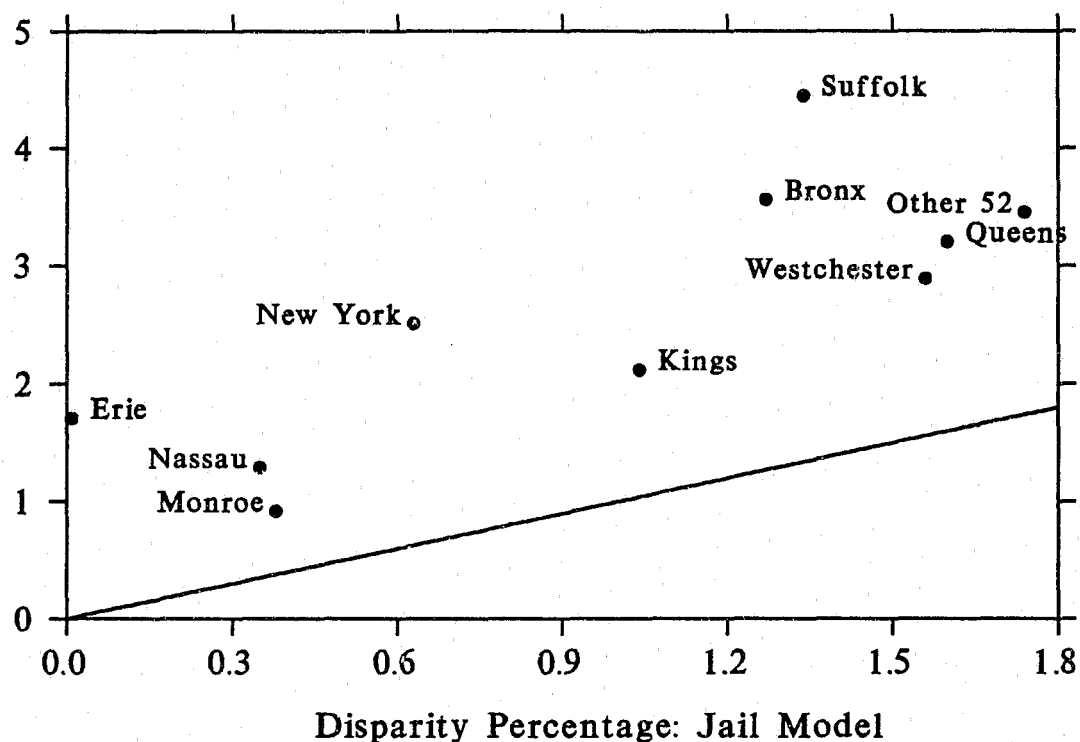
Differences in how disparity in incarceration outcomes is characterized using jail instead of using jail and time served sentences are graphically presented in Figure 1 for defendants without arrest records and in Figure 2 for defendants with arrest records. The top graph in each figure displays DPs and the lower graph displays logit parameters.

The line in the upper graph in Figure 1 shows where DPs based on jail and time served sentences (Y axis) equal DPs based on jail sentences (X axis). All of the points are above the line demonstrating that DPs based upon jail and time served sentences exceeded DPs based upon jail sentences. This shows that DPs were larger for sentences to jail or time served than for sentences to jail.

TABLE 13: The Percentage of Defendants Who Were Sentenced to Time Served by Final Disposition, Minority Status, Prior Record, and County, 1985-1986

County	Final Disposition					
	Percentage Time Served Among All Dispositions			Percentage Time Served Among Sentences to Jail or Time Served		
	Combined	White	Minority	Combined	White	Minority
No Prior Arrests						
New York	20%	19%	20%	96%	98%	95%
Bronx	5%	3%	5%	73%	83%	73%
Queens	3%	1%	3%	58%	66%	57%
Erie	2%	2%	3%	81%	77%	87%
Kings	1%	1%	2%	43%	47%	42%
Nassau	1%	0%	1%	57%	53%	60%
Suffolk	1%	0%	4%	57%	45%	65%
Westchester	1%	0%	2%	46%	45%	46%
Onondaga	1%	0%	2%	63%	50%	81%
Other 52	1%	1%	2%	29%	27%	37%
Monroe	1%	1%	1%	42%	39%	46%
NY State	5%	2.9%	9.0%	79%	70%	84%
NY State without NY County	1%	0.8%	2.8%	51%	38%	56%
At Least One Prior Arrest						
New York	25%	25%	26%	62%	71%	59%
Bronx	10%	7%	10%	32%	43%	31%
Queens	7%	4%	9%	27%	29%	26%
Erie	5%	5%	7%	44%	45%	43%
Kings	5%	3%	6%	24%	30%	23%
Nassau	5%	3%	10%	24%	22%	25%
Suffolk	4%	3%	9%	27%	25%	31%
Westchester	3%	1%	6%	15%	12%	16%
Onondaga	3%	2%	5%	27%	24%	33%
Other 52	3%	2%	5%	19%	19%	20%
Monroe	2%	1%	4%	25%	19%	32%
NY State	9%	5.2%	13.6%	39%	36%	41%
NY State without NY County	4%	3%	7%	25%	23%	26%

Disparity Percentage: Jail or Time Served Model



Logit Parameter: Jail or Time Served Model

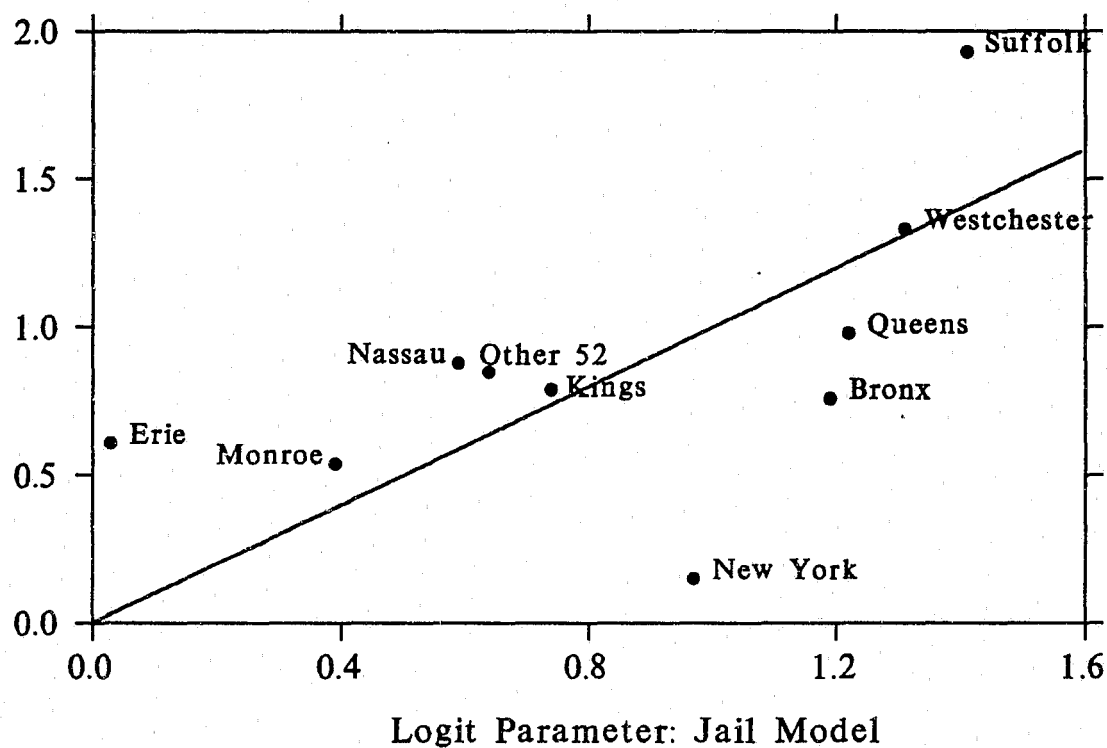
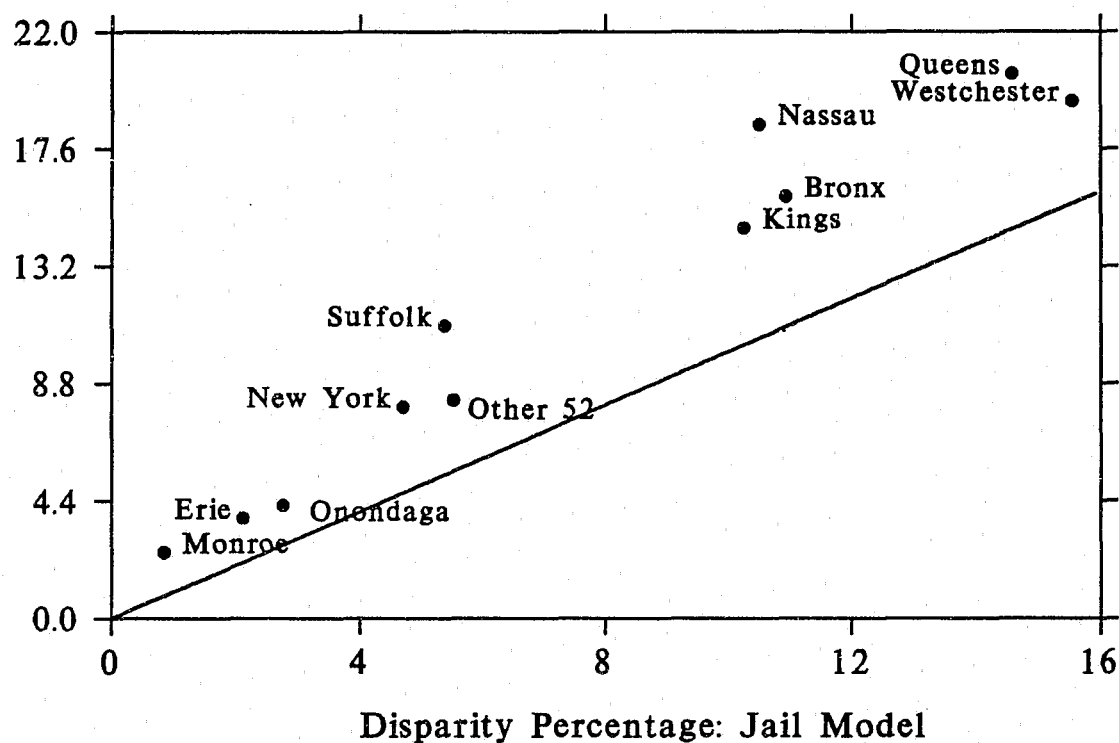


Figure 1: Scatter Diagrams of Disparity Percentages and Logit Parameters for 11 Counties Using Two Definitions of Incarceration for Defendants Without Prior Arrest Records, NYS, 1985-1986

Disparity Percentage: Jail or Time Served Model



Logit Parameter: Jail or Time Served Model

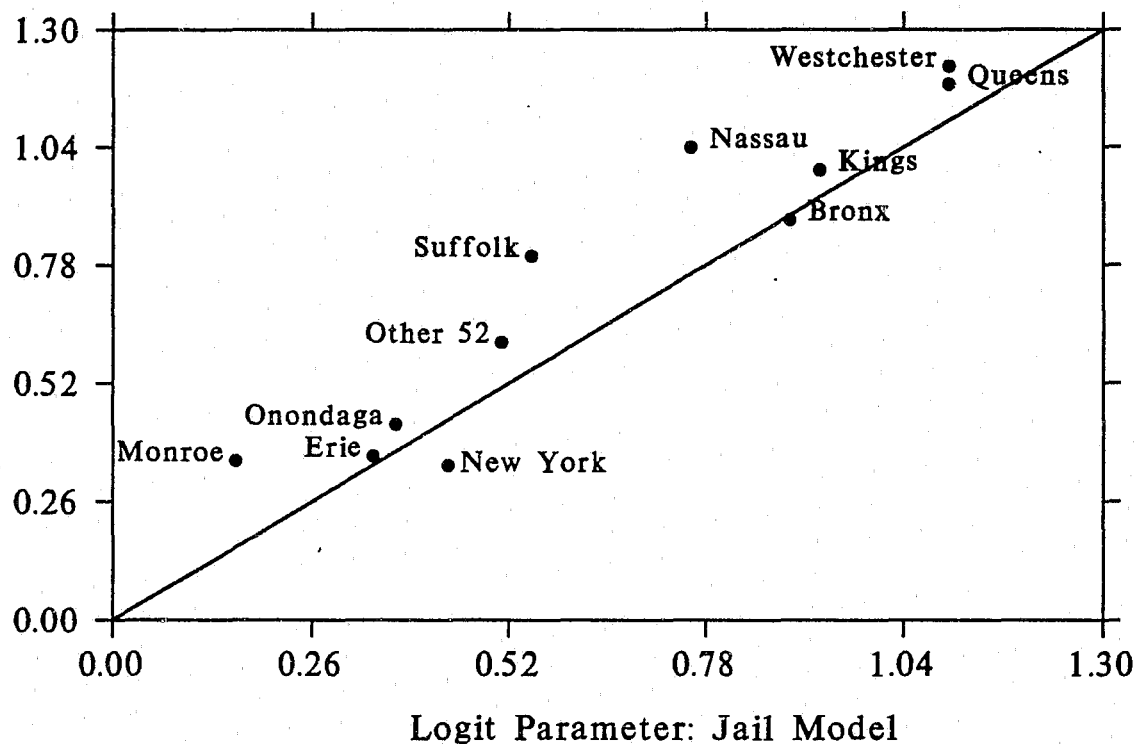


Figure 2: Scatter Diagrams of Disparity Percentages and Logit Parameters for 11 Counties Using Two Definitions of Incarceration for Defendants With Prior Arrest Records, NYS, 1985-1986

This pattern does not necessarily mean that adding time served to the definition of incarceration increased the strength of the relationship between incarceration and minority status though. The size of the DP depends both upon how often whites were incarcerated and upon the size of the logit parameter. Other things being equal, DPs based upon jail and time served sentences should be larger than DPs based upon jail sentences because more defendants were classified as incarcerated using the jail or time served definition of incarceration.

The dependency on the percentage of whites who were incarcerated can be ignored by comparing logit parameters. A plot of logit parameters for defendants without prior arrest records is presented in the lower graph of Figure 1. The line in the graph shows where parameters based on jail and time served sentences (Y axis) equal parameters based upon jail sentences (X axis). The lower graph shows that parameters based upon jail and time served sentences were larger than the parameters based upon jail incarcerations in all but New York, Bronx, and Queens Counties. In these three counties, parameters based upon jail incarcerations exceeded parameters based on jail and time served sentences. In other words, the association between minority status and incarceration was stronger based upon jail and time served sentences than based upon jail sentences in most counties. The association was stronger based upon jail incarcerations in three counties that most frequently sentenced defendants to time served sentences.

The lower graph also shows that the logit parameter based on jail and time served sentences in New York County was only slightly greater than zero. Apparently, New York's DP based upon jail and time served sentences (displayed in the top graph) was primarily due to its unusually high percentage of defendants who were sentenced to time served rather than due to an unusually strong association between minority status and time served sentences.

The DPs and logit parameters for defendants with prior arrest records are plotted in Figure 2. Both graphs demonstrate that disparities based upon sentences to jail or time served were highly correlated to disparities based upon sentences to jail. Furthermore, almost all DPs and logit parameters based upon sentences to jail or time served exceeded those based upon sentences to jail.

In summary, analyses based upon sentences to jail or time served and based upon sentences to jail demonstrate that minorities were incarcerated more often than comparably situated whites. The analysis based upon sentences to time served or jail was more powerful at uncovering disparities than the analysis based solely upon jail sentences. Subsequent analyses are based upon the more powerful definition.

4. A Charge Specific Analysis

The logit models used to this point assumed that minority status, prior record, concurrent felony arrests, and county affected case processing in the same way for each arrest charge. This is quite a restrictive assumption. It implies that logit parameters describing the association between minority status and case processing outcomes did not depend upon the arrest charge.

Logit models of time served and jail sentences were estimated separately for each arrest charge to learn if disparities were associated with particular arrest charges. Under these models, the seriousness of each crime was allowed to differ by county, the effect of prior record was allowed to differ by arrest charge within each county, and the relationship between minority status and incarceration was allowed to differ by arrest charge within each county. Seventeen models, one for each arrest charge, were estimated.

The models could not be estimated for all counties. Some counties did not have enough defendants to estimate the simultaneous effects of county, prior record score, concurrent felony arrests, and minority status on incarceration. The number of counties included in these models ranged from one in the analysis of A6 gambling charges to 11 in the analysis of A6 theft and A12 personal charges.

The total chi square statistic for the 17 models in Table 14 shows that using a separate model for each arrest charge produced a better description of the data than using only one model. Overall, the 17 models had a chi square value of 2,713 on 1,972 degrees of freedom. In contrast, the model that incorporated all arrest charges (presented in Table 11) had a chi square of 5,747 on 2,041 degrees of freedom.¹⁴

The goodness-of-fit statistics for the 17 models are summarized in Table 14. The percentage of possible cases that were used to estimate each model are presented in the last column. The bottom row shows that as a group, the 17 models were based upon 92.8 percent of all possible cases. The model for marihuana charges was based upon 61 percent of all possible marihuana cases, and the model for gambling charges was based upon only 32 percent of all possible gambling cases.

¹⁴ The total chi square for the 17 models is not quite comparable to the chi square for the single model because the models were based upon slightly different data sets. The 17 model chi square was based upon observed combinations of independent variables for arrest charges that could be estimated in each county. The data for counties that could not be estimated were not included in these chi square calculations. The single model chi square was based upon all observed combinations of independent variables that had at least five defendants. All counties were included in the single model.

The p values show how well each model described incarceration outcomes. P values of less than .01 suggest that models were inconsistent with the observed data. Inconsistencies could be due to ignoring significant effects or unusually large sample sizes.

The p values for most (65 percent) of the comparisons in Table 14 were larger than .01 suggesting that the models did an excellent job of describing the data. The low p values for A6 theft, A12 personal, A12 possession of a controlled substance charges appear to be due to an unusually large number of cases. The low p values for B order, A6 order and B personal charges appear to be due to ignoring significant effects.

TABLE 14: Goodness-of-Fit Statistics for 17 Models of Incarceration, 1985-1986

Arrest Charge	Pearson Chi Square	Degrees of Freedom	P Value	Number of Cases Analyzed	Percentage of Possible Cases
A6 Theft	485	251	<.01	84,798	100.0%
A12 Personal	264	207	.01	35,436	100.0%
A12 Poss Ctld Subst	261	175	<.01	32,288	99.1%
A6 Resisting Arrest	179	164	.20	14,291	96.0%
A6 Criminal Mischief	234	161	<.01	13,813	92.2%
A6 Drugs	115	89	.03	9,506	83.5%
A12 Weapons	164	148	.17	8,605	97.6%
B Bad Checks	43	34	.15	7,285	89.4%
A6 Trespass/Tools	184	161	.10	7,146	92.2%
B Order	196	76	<.01	7,102	81.3%
B Marihuana	70	63	.25	5,888	61.2%
B Trespass	121	127	.62	5,274	84.8%
A12 Order	52	56	.61	4,484	72.6%
B Personal	149	103	<.01	3,801	77.4%
A6 Order	109	72	<.01	3,776	77.4%
A6 Fraud	64	67	.57	3,629	78.1%
A6 Gambling	22	18	.22	1,142	32.0%
Total	2,713	1,972		248,264	92.8%

DPs based upon these 17 models are presented in Table 15. Question marks ("?") indicate that there were not enough defendants in the county to model incarceration outcomes for specific arrest charges. Statistically significant effects are marked by asterisks ("*").

The percentages in the overall row were taken from the earlier analysis that assumed disparity did not differ by arrest charge (Table 11). They represent one way of averaging DPs across arrest charges within each county.

Table 15 shows that there was considerable variability in the DPs associated with different arrest charges in different counties. The greatest variation occurred for defendants who had prior arrest records. For example, the DPs ranged from -1 for A6 drug charges to 23 for gambling charges in New York County; from -1 for B personal charges to 22 for A6 fraud charges in the 52 county unit; and from 2 for B order charges to 42 for B trespass charges in Westchester County.

TABLE 15: Disparity Percentages Based on 17 Models of Incarceration by Arrest Charge, Prior Record, and County, 1985-1986

Arrest Charge		County					
		NY State	Bronx	Kings	New York	Queens	Erie
No Prior Arrests							
A6	Trespass/Tools	10%*	10%	5%	1%	6%	?
A6	Fraud	10%*	?	?	18%*	?	9%
A12	Poss Ctld Subst	9%	6%*	3%*	-1%	3%	0%
B	Trespass	9%*	?	2%	13%*	4%	5%
B	Order	8%*	3%	-1%	8%*	?	1%
A6	Theft	8%*	6%*	3%*	11%*	4%*	0%
A6	Resisting Arrest	7%*	8%*	2%	7%*	8%*	5%
A6	Order	5%*	?	?	7%*	5%	3%
A12	Weapons	2%*	1%	1%	1%	4%	-2%
A6	Mischief	2%*	3%	0%	3%*	4%	0%
B	Marihuana	1%*	?	?	-3%*	-0%	?
A6	Drugs	1%	3%	1%	-11%	?	?
A12	Personal	1%*	-0%	1%	1%	1%	3%*
A12	Order	0%	-1%	?	5%	0%	4%
B	Bad Check	0%	?	?	?	?	?
B	Personal	0%	?	?	-0%	1%	?
A6	Gambling	-1%	?	?	1%	?	?
	Overall		4%	2%	3%	3%	2%
At Least One Prior Arrest							
A6	Trespass/Tools	19%*	28%*	25%*	14%*	29%*	?
B	Trespass	18%*	?	45%	8%	12%	6%
A6	Theft	17%*	14%*	26%*	11%*	20%*	3%
A12	Poss Ctld Subst	17%*	23%*	20%*	4%*	21%*	-0%
B	Order	15%*	18%	13%	14%*	?	13%*
A6	Drugs	13%*	1%	22%*	-1%	-0%	?
A6	Resisting Arrest	13%*	5%	18%*	4%	30%*	-13%*
B	Marihuana	13%*	?	?	7%	19%*	?
A6	Gambling	12%*	?	?	23%*	?	?
A6	Fraud	10%*	?	?	20%	?	2%
A6	Order	9%*	?	?	13%	12%	4%
A12	Weapons	8%*	3%	26%*	6%	16%*	7%
A6	Mischief	7%*	19%	15%*	7%	13%*	-3%
A12	Order	4%*	4%	?	0%	9%	11%
B	Personal	2%	?	?	4%	3%	?
A12	Personal	2%*	5%	8%	-0%	5%*	4%*
B	Bad Check	0%	?	?	?	?	?
	Overall		16%	15%	8%	20%	4%

TABLE 15: Disparity Percentages Based on 17 Models of Incarceration by Arrest Charge, Prior Record, and County, 1985-1986
- continued -

Arrest Charge	County					
	Monroe	Nassau	Onondaga	Suffolk	Westchester	Other 52
No Prior Arrest						
A6 Trespass/Tools	2%	4%	?	9%*	0%	10%*
A6 Fraud	?	2%	?	8%*	?	7%*
A12 Poss Ctld Subst	?	2%	?	8%*	5%*	6%*
B Trespass	1%	2%	?	8%*	9%*	3%
B Order	?	?	?	?	9%	-0%
A6 Theft	0%	1%	3%*	5%*	2%*	3%*
A6 Resisting Arrest	1%	2%	4%	6%*	?	5%*
A6 Order	5%	6%	?	?	?	2%
A12 Weapons	?	0%	4%	5%	1%	1%
A6 Mischief	3%*	?	?	0%	5%*	1%
B Marihuana	?	?	?	7%*	?	13%*
A6 Drugs	?	?	?	?	4%	8%*
A12 Personal	0%	2%	0%	2%	2%	3%*
A12 Order	?	?	?	?	?	0%
B Bad Check	-0%	?	?	?	?	0%
B Personal	2%	5%	?	1%	?	2%
A6 Gambling	?	?	?	?	?	?
Overall	1%	1%	2%	4%	3%	3%
At Least One Prior Arrest						
A6 Trespass/Tools	-1%	5%	?	6%	38%*	13%*
B Trespass	13%	14%*	?	12%	42%*	9%*
A6 Theft	6%*	21%*	5%	7%*	20%*	11%*
A12 Poss Ctld Subst	?	23%*	?	21%*	26%*	11%*
B Order	?	?	?	?	2%	7%
A6 Drugs	?	?	?	?	22%	9%*
A6 Resisting Arrest	1%	20%*	7%	15%*	?	7%*
B Marihuana	?	?	?	14%*	?	16%*
A6 Gambling	?	?	?	?	?	?
A6 Fraud	?	6%	?	3%	?	22%*
A6 Order	-3%	25%*	?	?	?	11%*
A12 Weapons	?	17%	51%*	24%*	20%*	1%
A6 Mischief	1%	?	?	5%	16%*	9%*
A12 Order	?	?	?	?	?	8%*
B Personal	-1%	11%	?	6%	?	-1%
A12 Personal	2%	20%*	5%	6%*	4%	5%*
B Bad Check	-0%	?	?	?	?	-0%
Overall	2%	19%	4%	11%	19%	8%

The logit parameters and DPs were averaged across counties to learn if disparities differed by arrest charge. These averages are presented in Table 16 and graphed in Figure 3. They do not represent New York State averages because they were not weighted by the number of defendants processed in each county.

The average logit parameters for defendants with arrest records are plotted against the average logit parameters for defendants without arrest records in the lower graph in Figure 3. The arrest charges are represented by the numbers 1 to 9, and the letters A through H. (The codes are listed in Table 16.) The numbers and letters would be concentrated in the center of the graph if disparities were unrelated to arrest charge. The spread of the coefficients suggests that disparities varied by arrest charge.

The line in the lower graph shows where logit parameters for defendants without arrest records equal logit parameters for defendants with arrest records. The numbers and letters in this graph would come close to this line if disparities differed by arrest charge but not by prior arrest record. In fact, most of the points in the graph did come close to this line.¹⁵ This suggests that the logit parameters were similar for defendants with and without arrest records.

Average DPs are plotted in the upper graph. These percentages depend upon the logit parameters and upon the percentage of white defendants who were incarcerated for each arrest charge. The graph shows that DPs differed by arrest charge and were considerably higher for defendants with than for defendants without arrest records. The dependence occurred because most defendants who were incarcerated had arrest records.

The arrest charges were grouped into three categories depending upon the size of the average DP for defendants with prior arrest records. The first group contains A12 weapons, B trespass, A6 trespass/tools, A12 possession of a controlled substance, A6 theft, and A6 resisting charges. They are numbered 1 (highest DP based upon a prior record) to 6 (lowest DP in this group) in Figure 3.

¹⁵ The logit parameters for A6 gambling charges (code F), A12 possession of a weapon (code 1), and A6 fraud (code D) charges deviated considerably from this line. The unusually large logit parameter for defendants with prior arrest records who were arrested for gambling charges was based upon how defendants were processed in New York County. The logit parameter for defendants who had a prior arrest record was quite large because very few white defendants with a prior arrest record were incarcerated for gambling charges in this county.

The unusually high parameter for defendants who had a prior arrest record and were arrested for possession of a weapon (code 1) does not appear to be due to any peculiarity in the data set. It suggests that there was considerably more disparity in processing defendants with prior arrest records than for processing defendants without prior arrest records.

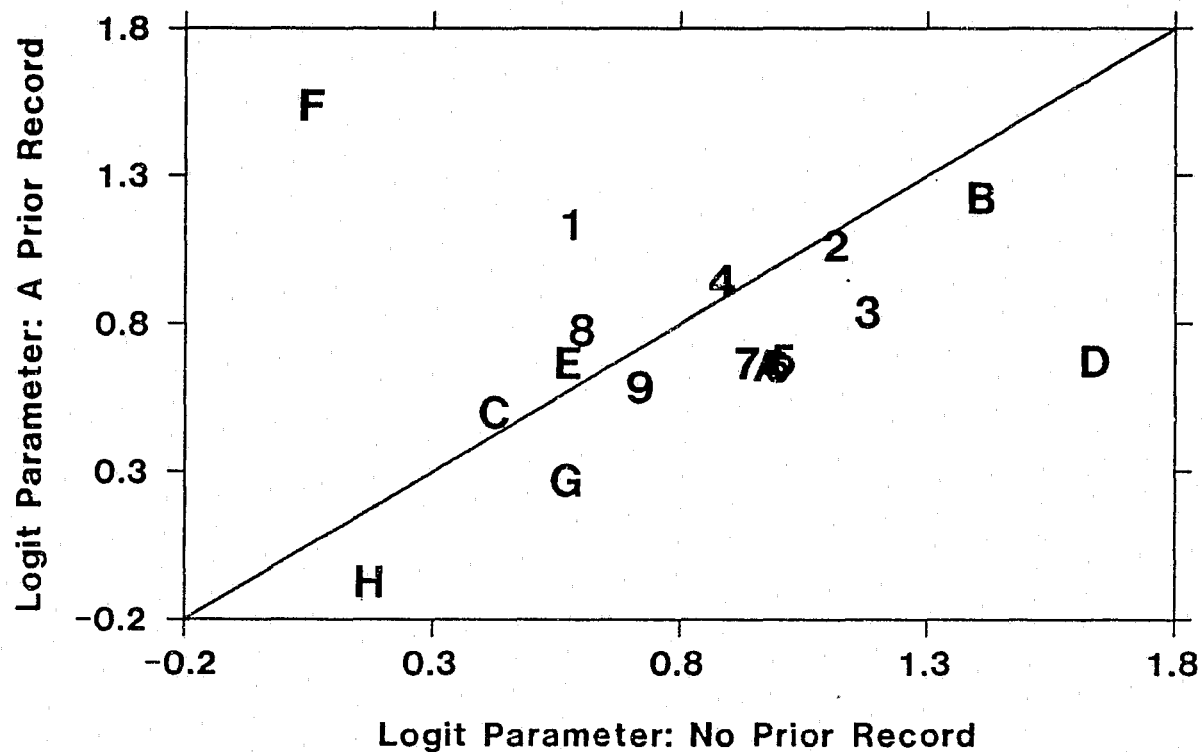
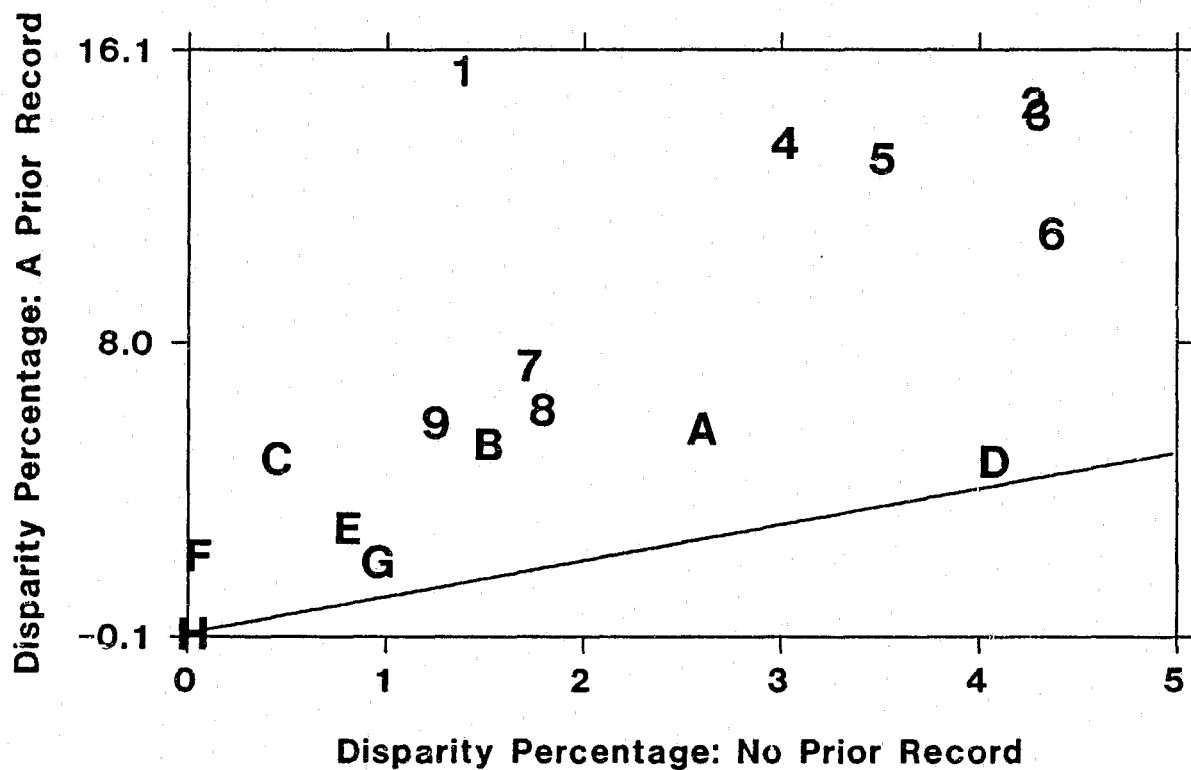


Figure 3: Scatter Diagrams of Average Incarceration Disparity Percentages and Average Incarceration Logit Parameters for 17 Arrest Charges, NYS, 1985-1986

TABLE 16: Disparity Percentages and Logit Parameters for 17 Models of Incarceration Averaged Across County by Arrest Charge and Prior Record, 1985-1986

Arrest Charge	Code	Disparity Percentages		Logit Parameters	
		No Prior Arrests	At Least One Prior Arrest	No Prior Arrests	At Least One Prior Arrest
Most Disparate Arrest Charges					
A12 Weapons	1	1.4%	15.5%	.58	1.14
B Trespass	2	4.3%	14.6%	1.12	1.07
A6 Trespass/Tools	3	4.3%	14.3%	1.18	.84
A12 Poss Ctl Subst	4	3.0%	13.5%	.89	.95
A6 Theft	5	3.5%	13.1%	1.01	.68
A6 Resisting Arrest	6	4.4%	11.0%	1.00	.65
Moderately Disparate Arrest Charges					
A6 Mischief	7	1.7%	7.4%	.94	.67
B Order	8	1.8%	6.2%	.60	.78
A12 Personal	9	1.3%	5.8%	.72	.59
A6 Order	A	2.6%	5.7%	.98	.66
B Marihuana	B	1.5%	5.2%	1.41	1.23
A6 Drugs	C	.4%	4.8%	.42	.50
A6 Fraud	D	4.1%	4.7%	1.64	.67
Least Disparate Arrest Charges					
A12 Order	E	.8%	2.9%	.57	.67
A6 Gambling	F	.1%	2.1%	.06	1.54
B Personal	G	1.0%	2.0%	.57	.27
B Bad Check	H	.0%	- .0%	.17	- .07
Unweighted Average		2.1%	7.6%	.81	.75

The second group contains the seven charges with the next greatest DPs. This group includes A6 criminal mischief, A12 personal, B and A6 order, B Marihuana, A6 Drugs, and A6 fraud charges. These charges are numbered 7 to 9, and lettered A through D.

The last group contains the four arrest charges with the lowest DPs for defendants with prior arrest records. It includes A12 order (comprised mostly of aggravated harassment and endangerment of a child charges), A6 gambling, B personal (comprised mostly of menacing and sexual abuse charges), and B bad check charges. These charges are labeled E through H in Figure 3.

In general, disparities measured by incarceration outcomes affected defendants arrested for most charges. Among defendants with an arrest record, disparities were most likely to affect defendants who were arrested for weapons, criminal trespass, possession of burglar tools, theft, possession of a controlled substance, or resisting arrest charges. They were least likely to affect defendants who were arrested for aggravated harassment, endangerment of a child, gambling, menacing, sexual abuse, and bad check charges.

5. Average Incarceration Disparity Percentages

Thus far, disparities measured by incarceration outcomes were estimated separately for defendants with and without arrest records. This technique improved the correspondence between the model and the data at the expense of having to interpret two measures of disparity for each county. At this point, it is unclear if disparate incarceration outcomes represent a single phenomenon that occurred within each county, or two phenomena; one for defendants with and another for defendants without arrest records.

The DPs and logit parameters based upon sentences to jail or time served were averaged across arrest charges separately for defendants with and for defendants without arrest records. The averages were weighted by the number of cases that were used to estimate each of the seventeen models in each county. They are presented in Table 17.

The DPs and logit parameters are graphed in Figure 4. DPs are presented in the upper graph and logit parameters are presented in the lower graph. Averages for defendants with arrest records are placed on the Y axis. Averages for defendants without arrest records are placed on the X axis.

TABLE 17: Disparity Percentages and Logit Parameters for 17 Models of Incarceration Averaged Across Arrest Charge by County and Prior Record, 1985-1986

County	Disparity Percentage			Logit Parameter			Percentage of Arrests Used in Each
	No Prior Record	A Prior Record	Combined	No Prior Record	A Prior Record	Combined	
Kings	2.1%	21.1%	11.2%	.80	.89	.84	88.5%
Westchester	3.1%	19.8%	10.2%	1.38	1.19	1.30	81.1%
Nassau	1.7%	19.4%	8.7%	.91	1.07	.97	82.7%
Bronx	4.2%	12.5%	8.6%	.69	.74	.71	86.1%
Queens	3.2%	15.1%	8.5%	.95	.92	.94	91.4%
Suffolk	5.0%	10.1%	7.2%	2.06	.77	1.50	88.0%
New York	4.1%	6.9%	5.4%	.42	.31	.37	100.0%
Other 52	3.0%	7.8%	5.0%	.70	.55	.64	99.7%
Onondaga	2.3%	6.6%	4.0%	1.58	.55	1.16	64.4%
Erie	1.5%	4.5%	2.8%	.41	.36	.39	88.0%
Monroe	.8%	3.1%	1.8%	.48	.36	.43	86.8%

The average logit parameters plotted in the lower graph came close to the line that represents equal association between minority status and incarceration outcomes for defendants with and without arrest records. The plot suggests that disparate processing resembled a single phenomenon. Average logit parameters for defendants without arrest records closely resembled average logit parameters for defendants with prior records. The unusually high average for defendants without prior arrest records in Suffolk County was largely due to B marihuana charges. The unusually high average for defendants without prior arrest records in Onondaga County was largely due to A6 theft charges.

The finding that logit parameters were similar for defendants with and without arrest records does not imply that DPs were similar. DPs depend upon logit parameters and percentages of whites who were incarcerated. The upper graph in Figure 4 shows that average DPs were considerably higher for defendants with than for defendants without arrest records. The differences were most noticeable in Nassau, Kings, Westchester, and Queens Counties. The differences arose because few defendants (white or minority) without arrest records were incarcerated.

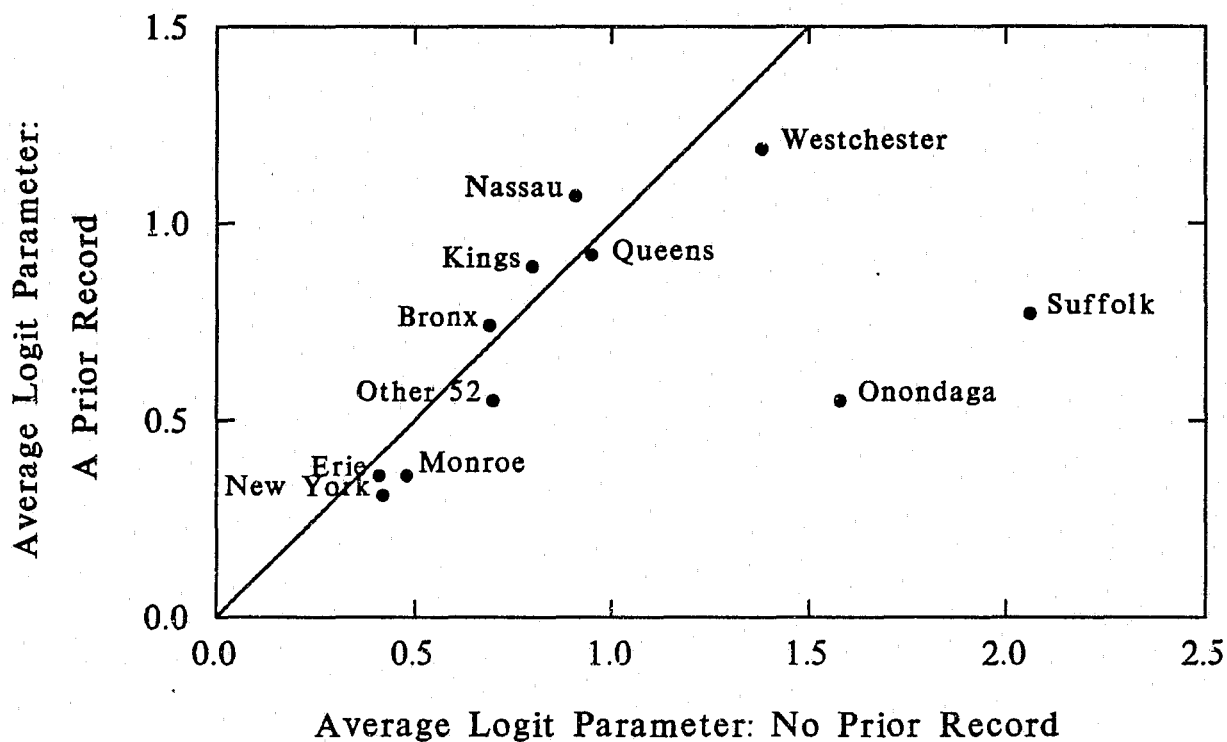
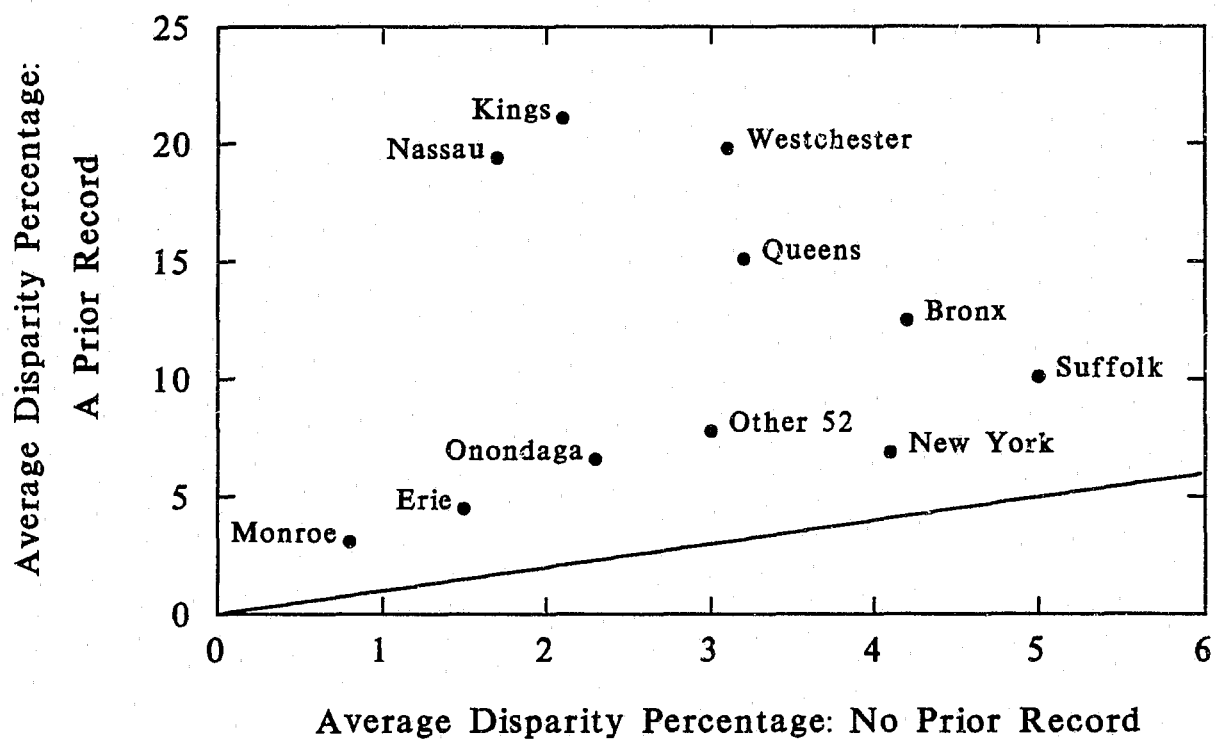


Figure 4: Scatter Diagrams of Average Incarceration Disparity Percentages and Average Incarceration Logit Parameters for 11 Counties, NYS, 1985-1986

Average logit parameters or average DPs can be used to rank counties on disparities in jail and time served outcomes. Both averages are displayed in Table 17. The counties are ordered by their average DP in this table because this report emphasizes differences in how often comparably situated whites and minorities were processed in different ways.

The average DP is plotted against the average logit parameter in Figure 5. The figure shows that using logit parameters to measure disparate incarceration outcomes would place Suffolk and Onondaga Counties considerably higher on the scale than would using DPs.

6. Disparities in the Least Populous Counties

The preceding analyses estimated disparities for defendants in the 52 least populous counties as if they were processed in the same county. The aggregation simplified statistical analysis but suppressed differences between counties.

An attempt was made to increase the number of cases so that disparities could be estimated in more counties. All arrests that occurred in 1985 and 1986 for the 17 misdemeanor charges studied in the main body of the paper were selected for this analysis. Basing the analysis upon arrests rather than defendants increased the number of cases from 248,264 to 345,872. The increase occurred because a number of defendants were arrested more than once in 1985 and 1986.

The number of arrests are presented in Table 18. The counties are presented in two sections. The 27 counties in the first section accounted for 99.3 percent of the arrests of minorities who were processed for the 17 misdemeanor charges studied here. The 35 counties in the second section accounted for less than one percent of the arrests of minorities.

Disparities were approximated for incarceration outcomes. Defendants were categorized as incarcerated if they were sentenced to jail or time served. They were categorized as not incarcerated if they had their cases dismissed, acquitted, or if they were sentenced to fines, probation, conditional discharge, or unconditional discharge.

Differences in arrest charges were controlled by limiting the analysis to the most common arrest charge, A6 theft charges. These charges were found to have a substantial amount of disparity. A6 theft charges represented 27 percent of the arrests presented in Table 18. Differences in prior records were crudely controlled by categorizing defendants as either having or not having been arrested in the past ten years.

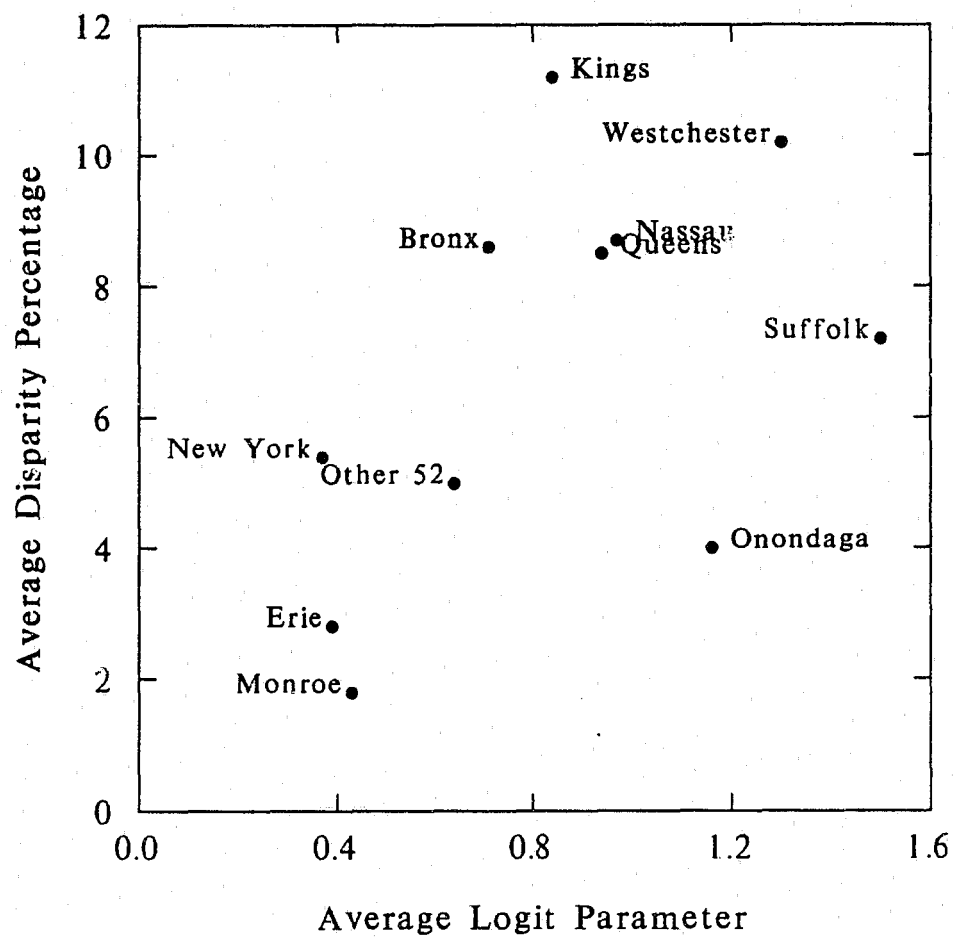


Figure 5: Scatter Diagrams of Average Incarceration Disparity Percentages by Average Incarceration Logit Parameters for 11 Counties, NYS, 1985-1986

TABLE 18: Number and Percentage of Defendants by Minority Status and County: Arrest Based Data, NYS, 1985-1986

County	Minority	Number of Defendants White	Total	Percentage Minorities Statewide	Cumulative Percentage Statewide
First Section: 27 Counties With Enough Minorities to Analyze A6 Theft Charges					
New York	82,799	16,716	99,515	41.9%	41.9%
Kings	31,52	26,976	38,498	16.0%	57.9%
Bronx	23,155	2,593	25,748	11.7%	69.6%
Queens	14,241	6,027	20,268	7.2%	76.8%
Erie	7,804	11,479	19,283	4.0%	80.8%
Monroe	6,505	8,041	14,546	3.3%	84.1%
Westchester	6,115	5,670	11,785	3.1%	87.2%
Nassau	5,564	8,093	13,657	2.8%	90.0%
Suffolk	3,824	10,283	14,107	1.9%	91.9%
Richmond	2,329	2,912	5,241	1.2%	93.1%
Onondaga	2,010	4,759	6,769	1.0%	94.1%
Orange	1,576	4,211	5,787	0.8%	94.9%
Albany	1,420	3,955	5,375	0.7%	95.6%
Dutchess	1,274	2,951	4,225	0.6%	96.3%
Niagara	1,017	2,796	3,813	0.5%	96.8%
Rockland	861	1,427	2,288	0.4%	97.2%
Ulster	510	2,420	2,930	0.3%	97.5%
Sullivan	502	1,341	1,843	0.3%	97.8%
Schenectady	441	1,749	2,190	0.2%	98.0%
Oneida	370	2,352	2,722	0.2%	98.2%
Broome	367	3,456	3,823	0.2%	98.4%
Rensselaer	344	1,461	1,805	0.2%	98.5%
Wayne	335	1,714	2,049	0.2%	98.7%
Chemung	330	1,535	1,865	0.2%	98.9%
Chautauqua	290	1,893	2,183	0.1%	99.0%
Ontario	260	1,371	1,631	0.1%	99.1%
Tompkins	213	1,473	1,686	0.1%	99.3%
Second Section: 35 Counties Without Enough Minorities to Analyze A6 Theft Charges					
Columbia	178	975	1,153	0.1%	99.3%
Cayuga	167	992	1,159	0.1%	99.4%
Saratoga	140	3,036	3,176	0.1%	99.5%
Orleans	101	351	452	0.1%	99.5%
Genesee	94	655	749	0.0%	99.6%
Montgomery	82	611	693	0.0%	99.6%
Otsego	66	1,080	1,146	0.0%	99.7%
Greene	65	593	658	0.0%	99.7%

TABLE 18: Number and Percentage of Defendants by Minority Status and County: Arrest Based Data, NYS, 1985-1986

-continued-

County	Minority	Number of Defendants White	Total	Percentage Minorities Statewide	Cumulative Percentage Statewide
Second Section: 35 Counties Without Enough Minorities to Analyze A6 Theft Charges -continued-					
Cattaraugus	59	849	908	0.0%	99.7%
Oswego	49	1,519	1,568	0.0%	99.8%
Putnam	47	1,097	1,144	0.0%	99.8%
Steuben	46	1,030	1,076	0.0%	99.8%
Clinton	46	961	1,007	0.0%	99.8%
Livingston	45	1,284	1,329	0.0%	99.9%
Seneca	32	512	544	0.0%	99.9%
Warren	29	1,489	1,518	0.0%	99.9%
Jefferson	29	826	855	0.0%	99.9%
Cortland	25	1,239	1,264	0.0%	99.9%
Madison	23	853	876	0.0%	99.9%
Delaware	22	776	798	0.0%	99.9%
St Lawrence	17	1,750	1,767	0.0%	99.9%
Fulton	17	681	698	0.0%	100.0%
Herkimer	17	584	601	0.0%	100.0%
Schoharie	14	564	578	0.0%	100.0%
Essex	14	483	497	0.0%	100.0%
Chenango	13	771	784	0.0%	100.0%
Wyoming	11	281	292	0.0%	100.0%
Franklin	9	776	785	0.0%	100.0%
Tioga	7	600	607	0.0%	100.0%
Washington	5	566	571	0.0%	100.0%
Allegany	3	367	370	0.0%	100.0%
Yates	3	167	170	0.0%	100.0%
Schuyler	1	257	258	0.0%	100.0%
Lewis	0	149	149	0.0%	100.0%
Hamilton	0	40	40	0.0%	100.0%
Total	197,454	148,418	345,872		

The observed percentage of whites and minorities who were sentenced to jail or time served was calculated for counties that had at least 25 cases for all combinations of minority status (white vs. minority) by prior arrest record (yes vs. no). Counties with fewer than 25 cases for any of these combinations were combined into one unit for analysis. Using this procedure, it was possible to estimate incarceration percentages in 27 counties. The counties that did not have enough cases to estimate incarceration percentages are listed in the second section of Table 18.

The percentages of whites and minorities who were incarcerated are presented in Table 19. The counties are sorted by the difference in incarceration percentages for minorities and whites who had arrest records. For example, the largest difference occurred in Westchester County. In this county, 54 percent of the minorities with arrest records but only 26 percent of the whites with arrest records were incarcerated. These percentages produced a difference of 28 percent.

The observed differences demonstrate that minorities were incarcerated far more often than whites. In 26 counties, minorities with arrest records were incarcerated more often than whites with arrest records. The differences were statistically significant in 25 of the 27 counties.¹⁶ In most counties, minorities without prior arrest records were incarcerated more often than whites. The differences were significant in 17 of the 27 counties.

In general, Table 19 demonstrates that the disparities in incarceration outcomes occurred in almost every county in the State that had enough minorities to estimate differences in incarceration outcomes. Minorities who were arrested for A6 theft charges were much more likely to be incarcerated than whites arrested for these charges. Disparities varied by county.

F. Interrelationships Among Processing Outcomes

The analysis of separate processing outcomes identified disparities that occurred between arrest and sentencing but did not show how they were interrelated. DPs for each processing outcome were plotted against the average incarceration DP to show how disparities in processing outcome were related to each other, and to show how they were related to the average incarceration DP. This average was used as a comparison value because it summarizes numerous decisions that affected how defendants were processed from arrest to sentencing.

¹⁶ The statistical significance was based upon a difference in percentages test using a pooled estimate of the standard error. The independence assumption of the test was violated because multiple arrests of the same defendant were not independent events.

TABLE 19: Observed Percentages of Whites and Minorities Who Were Sentenced to Jail or Time Served for Theft Arrest Charges by Prior Record and County: Arrest Based Data, NYS, 1985-1986

County	Percentage Sentenced to Jail or Time Served				Observed Difference	
	No White (W1)	Prior Arrest Record		Yes Minority (M2)	Prior Arrest Record	
		No Minority (M1)	Yes White (W2)		No (M1-W1)	Yes (M2-W2)
27 Counties With Enough Minorities to Analyze A6 Theft Charges						
Westchester	1%	2%	26%	54%	1%	28%
Nassau	1%	5%	32%	59%	3%	27%
Rockland	1%	11%	18%	44%	10%	27%
Niagara	6%	14%	32%	57%	8%	26%
Wayne	2%	8%	12%	38%	6%*	26%
Sullivan	5%	14%	30%	54%	9%	24%
Orange	2%	3%	14%	37%	1%*	23%
Albany	2%	9%	23%	43%	7%	21%
Oneida	4%	7%	25%	46%	4%*	20%
Richmond	1%	6%	14%	34%	5%	20%
Schenectady	3%	10%	27%	47%	7%	20%
Broome	2%	21%	20%	39%	20%	20%
Rensselaer	6%	6%	29%	48%	0%*	19%
Dutchess	2%	4%	17%	36%	3%	19%
Kings	3%	7%	23%	42%	4%	19%
Queens	3%	8%	35%	53%	5%	19%
Suffolk	2%	10%	23%	40%	7%	17%
Bronx	4%	11%	35%	50%	8%	15%
Chemung	3%	2%	24%	37%	-1%*	12%
Monroe	1%	1%	12%	24%	0%*	12%
Ulster	1%	7%	20%	32%	6%	12%
Chautauqua	5%	9%	22%	33%	4%*	11%
Onondaga	0%	3%	12%	22%	2%	11%
Erie	2%	3%	19%	29%	1%*	9%
New York	9%	21%	47%	56%	12%	9%
Ontario	2%	7%	26%	28%	5%*	2%*
Tompkins	2%	4%	8%	8%	2%*	0%*
Total	3%	12%	25%	49%	9%	24%
35 Counties Without Enough Minorities to Analyze A6 Theft Charges						
Total	4%	8%	21%	32%	4%	11%
All 62 Counties						
All Counties	3%	12%	24%	49%	9%	25%

*Difference was not statistically significant.

Disparities in processing outcomes are presented in 12 scatter diagrams in Figure 6. The Y axis in each scatter diagram measures DPs on a scale ranging from -20% to +20%. The region above the zero line is shaded gray. It identifies outcomes that occurred more often to minorities than to whites. The region below the zero line is left white. It identifies outcomes that occurred more often to whites than to minorities. The X axis measures average incarceration DPs. They ranged from 1.8% in Monroe County to 11.2% in Kings County.

The letters in each scatter diagram represent DPs for each county. The percentages for most counties are displayed by the first letter of the county's name. Nassau County is identified by the letter A, New York County by the letter Y, and the 52 county aggregate by the number 5.

1. Culpability

The top pair of scatter diagrams in Figure 6 show that in most counties, minorities were disposed as if they had committed a culpable act about as often as whites. Minorities were treated as culpable defendants less often than whites in Monroe, Erie, and Suffolk. In other words, they had their cases dismissed more often than whites in these counties. Monroe and Erie had the lowest average incarceration DPs. Except for these two counties, the scatter diagrams suggest that DPs for culpable disposition were unrelated to average incarceration DPs.

2. ACD Dispositions

The next pair of scatter diagrams suggests that there was no simple relationship between DPs for ACD dispositions and average incarceration DPs. For defendants without arrest records, the largest DPs occurred in counties (New York, Suffolk, and Westchester) that were moderate or high on average incarceration DPs. For defendants with arrest records, the largest DPs occurred in counties (Onondaga, Erie, and Suffolk) that were low or moderate on average incarceration DPs.

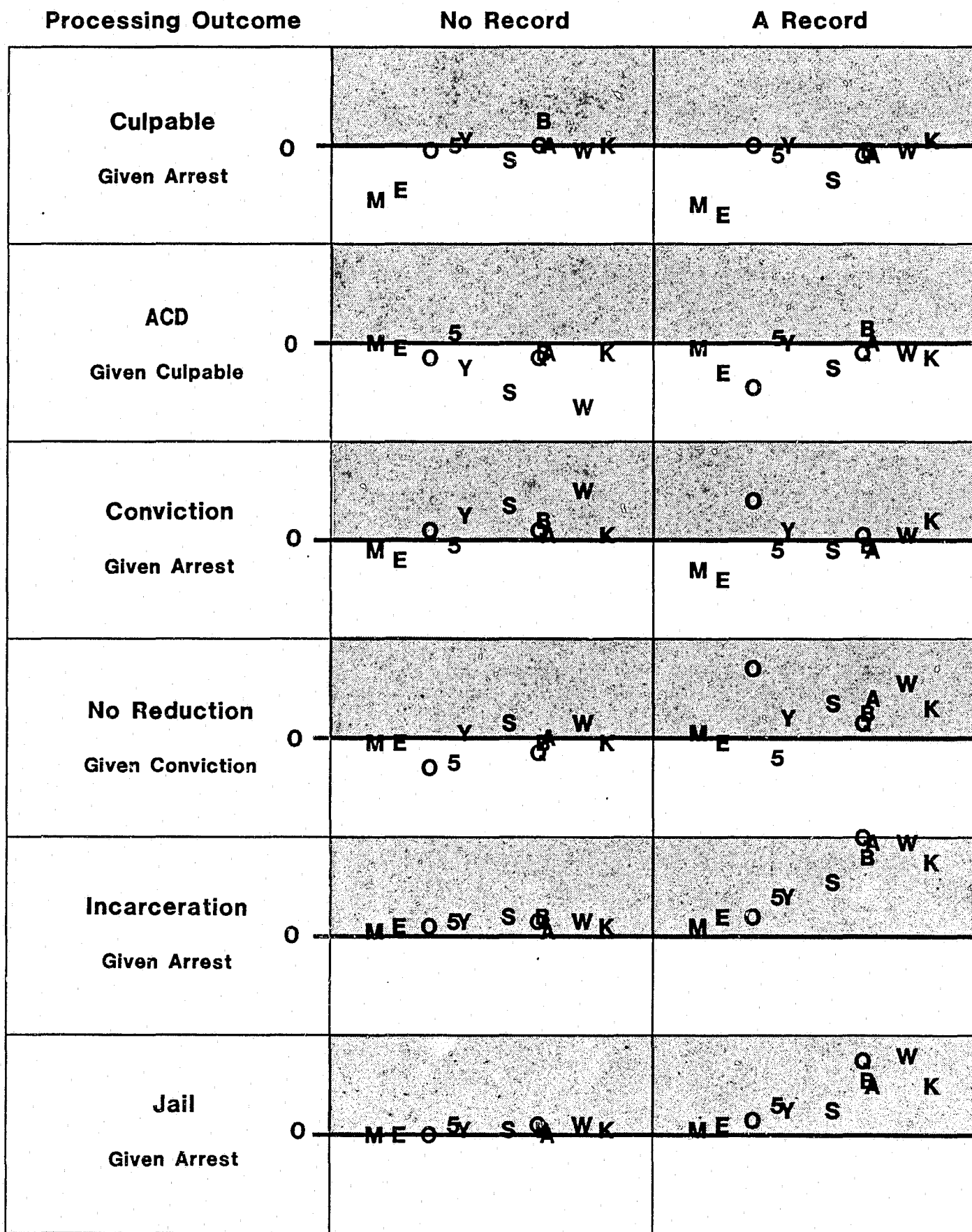


Figure 6: Scatter Diagrams of Disparity Percentages for Processing Outcomes by Average Incarceration Disparity Percentages, NYS, 1985-1986

3. *Convictions*

The next pair of scatter diagrams suggest that DPs for convictions were weakly related to average incarceration DPs. This pattern can be accounted for by disparities in culpability and ACD outcomes. With the exception of Monroe, Erie, and Suffolk Counties, the scatter diagrams for disparities in convictions mirror the disparities for ACD dispositions. The disparities for convictions can be obtained from the disparities for ACD dispositions by changing the sign of the DP. This symmetry occurred because almost all defendants had their cases dismissed, convicted, or adjourned in contemplation of dismissal. Because dismissals occurred as often to whites as they did to minorities, disparities in ACD decisions were necessarily balanced by disparities in convictions. Granting ACD dispositions more often to whites than minorities resulted in convicting minorities more often than whites.

In Monroe, Erie, and to a lesser extent in Suffolk Counties, disparities in convictions were balanced by disparities in dismissals and ACD dispositions. In particular, whites were convicted more often than minorities in Monroe and Erie Counties because minorities were dismissed more often than whites.

4. *Charge Reductions*

The scatter diagrams show that DPs for charge reductions tended to increase with the size of the average incarceration DP for defendants with but not for defendants without arrest records. DPs were uniformly small for defendants without arrest records. The DP in Onondaga was unusually large for defendants with arrest records.

5. *Incarcerations*

The scatter diagrams for disparities in sentences to jail or time served and the scatter diagrams for disparities in sentences to jail are quite similar. DPs were highly correlated to average DPs for defendants with arrest records. (Pearson correlations equalled .84 for incarceration DPs and .84 for jail DPs.) They were moderately correlated for defendants without prior arrest records. (Pearson correlations equalled .31 and .50, respectively.)

6. Summary

In summary, minorities received more serious dispositions than whites. Whites were granted ACD dispositions more often than minorities. Among convicted defendants with arrest records, whites had their charges reduced more often than minorities. Minorities were sentenced to jail or time served more often than whites in virtually every county that had enough cases to make comparisons possible. DPs for jail and time served outcomes were considerably larger for defendants with than for defendants without arrest records because few defendants without arrest records were sentenced to jail or time served. Disparities in ACD outcomes were not related to disparities in incarceration outcomes. Disparities in charge reductions were related to disparities in incarceration outcomes.

V. Statistical Models of Sentencing Decisions

Sentencing is the last step in case processing. It involves selecting a sanction for defendants who were convicted of a crime or violation. Sentences for misdemeanor crimes can occur at arraignment.

Even though sentences are set by judges, disparities in sentencing decisions do not necessarily imply that judges treated minorities differently than whites. Disparities in sentencing decisions could also be due to disparities in plea or sentence bargains that were made between defendants, prosecuting attorneys, and defense attorneys before cases were presented to judges.

The sentencing decision was modeled in several ways. Logit models were used to estimate disparities in the type of sanction. Regression models were used to estimate disparities in sentence lengths for defendants who were sentenced to jail and to estimate disparities in fine amounts for defendants who were sentenced to pay fines.

A. Types of Sentences

Defendants who were convicted of misdemeanor charges could be sentenced to jail, time served, fines, probation, unconditional discharge, conditional discharge, and to combinations of jail, fines, and probation. The analysis of sentence types was simplified by classifying sentences by the most serious sanction (ordered discharge, fines, probation, then jail). Conditional and unconditional discharges were combined into one category, and the analysis was limited to defendants who did not receive a time served sentence. Defendants who were sentenced to time served were excluded from analysis because it could not be determined from the available data which defendants were eligible for this sentence.

Unconditional and conditional discharges were combined into one category because almost all defendants (34,279 out of 36,518) who had their cases discharged were sentenced to conditional discharge. Conditional discharges can include restitution services, reparation payments, community service, psychiatric treatment, substance abuse treatment, as well as restrictions on living arrangements, visiting disreputable places, and consorting with disreputable persons. Conditions can be imposed for up to one year. Unconditional discharges cannot include restrictions.

The sentencing decision was modeled as four separate questions: (1) Who was sentenced to jail? (2) Who was sentenced to fines? (3) Who was sentenced to probation? and (4) Who was sentenced to discharge? Logit models were used to control for differences in the most serious arrest charge, the prior record score, the number of concurrent felony arrests, the county of jurisdiction, and the class of the most serious conviction charge. Disparities in these analyses were related to each other because defendants who did not receive one sanction necessarily received another.

1. Jail

The observed and modeled percentages of white and minority defendants who were sentenced to jail are classified by county in Table 20. The model describes the odds of being sentenced to jail for defendants who were sentenced to jail, fines, probation, or discharge. The DPs demonstrate that minorities were sentenced to jail much more often than whites. Among defendants without arrest records, significant disparities were found in seven counties (DPs ranged from 2 to 5). Among defendants with arrest records, significant disparities were found in 10 counties (DPs ranged from 8 to 25).

The counties in this and in subsequent tables are ordered from high to low by their average incarceration DP. These averages summarize disparities that occurred between arrest and sentencing. In contrast, disparities in sentencing sanctions are quite focused. They summarize disparities in sanctions that were applied to convicted defendants who were not sentenced to time served.

Table 20 shows that DPs for jail sentences tended to increase with the size of the average incarceration DP for defendants with but not for defendants without arrest records. For defendants with arrest records, the counties with the five lowest average DPs (Monroe, Erie, Onondaga, the Other 52, and New York) had the smallest DPs for jail sentences, and those with the six highest average DPs had the highest DPs for jail sentences. There was no similar pattern for defendants without arrest records.

TABLE 20: Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, NYS, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M-W)	Logit Parameter	Effect* is to Incarcerate:
	White (W)	Minority				
No Prior Arrests						
Kings	3%	6%	7%	4%	0.79	Minorities
Westchester	2%	5%	5%	3%	1.01	Minorities
Nassau	1%	1%	1%	0%	0.51	
Bronx	1%	5%	4%	3%	1.15	Minorities
Queens	2%	6%	5%	4%	1.24	Minorities
Suffolk	1%	4%	4%	3%	1.33	Minorities
New York	1%	3%	3%	2%	1.01	Minorities
Other 52	4%	8%	9%	5%	0.81	Minorities
Onondaga	2%	2%	3%	1%	0.35	
Erie	1%	1%	1%	0%	-0.02	
Monroe	4%	6%	6%	2%	0.48	
NY State	3%	5%				
At Least One Prior Arrest						
Kings	13%	30%	28%	15%	0.96	Minorities
Westchester	15%	40%	34%	20%	1.12	Minorities
Nassau	17%	46%	37%	21%	1.09	Minorities
Bronx	15%	37%	38%	23%	1.24	Minorities
Queens	15%	39%	40%	25%	1.33	Minorities
Suffolk	14%	35%	29%	15%	0.89	Minorities
New York	20%	36%	31%	11%	0.57	Minorities
Other 52	16%	33%	29%	13%	0.77	Minorities
Onondaga	12%	20%	16%	4%	0.30	
Erie	10%	22%	19%	8%	0.68	Minorities
Monroe	14%	24%	24%	10%	0.69	Minorities
NY State	15%	35%				

Pearson Chi Square: 4,387 on 3,143 Degrees of Freedom:

*Only statistically significant effects are labeled.

2. Fines

The observed and modeled percentages of white and minority defendants who were sentenced to fines are classified by county in Table 21. The model describes the odds of being sentenced to fines for defendants who were sentenced to jail, fines, probation, or discharge. The table demonstrates that whites were fined much more often than comparably situated minorities. Among defendants without arrest records, significant disparities were found in 10 counties (DPs ranged from -4 to -25). Among defendants with arrest records, significant disparities were found in all 11 counties (DPs ranged from -7 to -23). In most counties, DPs for fine sentences were larger than DPs for jail sentences.

3. Discharges

The observed and modeled percentages of white and minority defendants who were sentenced to discharge are classified by county in Table 22. The model describes the odds of being sentenced to discharge for defendants who were sentenced to jail, fines, probation, or discharge. This table shows that minorities were sentenced to discharge more often than whites in many counties. Among defendants without arrest records, minorities were sentenced to discharge more than whites in eight counties (DPs ranged from 3 to 24). Among defendants with arrest records, minorities were sentenced to discharge more than whites in five counties (DPs ranged from 5 to 15) but less than whites in the 52 county aggregate (DP = -4).

The largest disparities were found in the three counties with the lowest average incarceration DPs (Onondaga, Erie, and Monroe). In these counties, DPs ranged from 14 to 24 for defendants without prior arrest records and from 10 to 15 for defendants with prior arrest records. Disparities were larger for defendants without prior arrest records than for defendants with prior arrest records.

4. Probation

The observed and modeled percentages of white and minority defendants who were sentenced to probation are classified by county in Table 23. The model describes the odds of being sentenced to probation for defendants who were sentenced to jail, fines, probation, or discharge. This table shows that minorities were sentenced to probation about as often as comparably situated whites. The only notable disparity occurred in Nassau county for defendants who had arrest records (DP = -8). Here, whites received probation more often than comparably situated minorities.

TABLE 21: Observed and Modeled Percentage of Defendants Who Were Fined Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, NYS, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M-W)	Logit Parameter	Effect* is to Fine:
	White (W)	Minority				
No Prior Arrests						
Kings	58%	53%	51%	-8%	-0.31	Whites
Westchester	68%	58%	58%	-10%	-0.44	Whites
Nassau	64%	52%	49%	-14%	-0.58	Whites
Bronx	60%	57%	56%	-3%	-0.14	
Queens	58%	54%	51%	-7%	-0.27	Whites
Suffolk	77%	68%	69%	-8%	-0.43	Whites
New York	36%	30%	32%	-4%	-0.18	Whites
Other 52	63%	57%	55%	-7%	-0.31	Whites
Onondaga	38%	28%	22%	-16%	-0.77	Whites
Erie	56%	34%	31%	-25%	-1.03	Whites
Monroe	39%	19%	18%	-21%	-1.09	Whites
NY State	60%	45%				
At Least One Prior Arrest						
Kings	54%	33%	35%	-20%	-0.82	Whites
Westchester	55%	33%	35%	-20%	-0.84	Whites
Nassau	40%	17%	20%	-20%	-0.97	Whites
Bronx	59%	40%	41%	-18%	-0.74	Whites
Queens	55%	36%	34%	-21%	-0.87	Whites
Suffolk	63%	43%	50%	-14%	-0.57	Whites
New York	28%	17%	21%	-7%	-0.36	Whites
Other 52	51%	40%	41%	-10%	-0.42	Whites
Onondaga	29%	16%	17%	-12%	-0.72	Whites
Erie	50%	29%	27%	-23%	-0.99	Whites
Monroe	28%	13%	12%	-16%	-1.07	Whites
NY State	49%	28%				

Pearson Chi Square: 6,767 on 3,143 Degrees of Freedom

*Only statistically significant effects are labeled.

TABLE 22: Observed and Modeled Percentage of Defendants Who Were Sentenced to Discharge Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage	Disparity Percentage	Logit Parameter	Effect* is to Dismiss:
	White (W)	Minority	Minority (M)	(M-W)		
No Prior Arrests						
Kings	37%	40%	41%	4%	0.16	Minorities
Westchester	25%	27%	29%	5%	0.23	Minorities
Nassau	30%	40%	42%	13%	0.56	Minorities
Bronx	38%	37%	38%	1%	0.03	
Queens	38%	39%	40%	2%	0.10	
Suffolk	18%	22%	23%	5%	0.31	Minorities
New York	63%	67%	66%	3%	0.15	Minorities
Other 52	27%	27%	27%	0%	0.01	
Onondaga	50%	61%	63%	14%	0.56	Minorities
Erie	39%	60%	63%	24%	0.97	Minorities
Monroe	51%	71%	72%	21%	0.90	Minorities
NY State	32%	47%				
At Least One Prior Arrest						
Kings	31%	35%	36%	5%	0.23	Minorities
Westchester	20%	16%	21%	1%	0.08	
Nassau	22%	21%	29%	7%	0.38	Minorities
Bronx	24%	22%	24%	-1%	-0.03	
Queens	26%	22%	26%	0%	0.01	
Suffolk	14%	13%	14%	0%	0.00	
New York	50%	45%	48%	-1%	-0.05	
Other 52	25%	19%	21%	-4%	-0.21	Whites
Onondaga	49%	52%	59%	10%	0.42	Minorities
Erie	30%	39%	45%	15%	0.65	Minorities
Monroe	50%	54%	60%	10%	0.40	Minorities
NY State	28%	33%				

Pearson Chi Square: 7,342 on 3,143 Degrees of Freedom

*Only statistically significant effects are labeled.

TABLE 23: Observed and Modeled Percentage of Defendants Who Were Sentenced to Probation Given That They Were Sentenced to Jail, Fines, Probation, or Discharge by Minority Status, Prior Arrest Record, and County, 1985-1986

County	Observed Percentage		Modeled Percentage	Disparity Percentage	Logit Parameter	Effect* is to Probate:
	White (W)	Minority	Minority (M)	(M-W)		
No Prior Arrests						
Kings	1%	1%	1%	0%	0.26	Minorities
Westchester	5%	10%	8%	2%	0.42	
Nassau	6%	8%	7%	1%	0.21	
Bronx	1%	1%	1%	0%	0.34	
Queens	2%	2%	3%	1%	0.27	
Suffolk	4%	5%	4%	1%	0.18	
New York	1%	1%	0%	0%	-0.29	
Other 52	6%	7%	8%	2%	0.32	
Onondaga	10%	9%	13%	3%	0.33	
Erie	4%	5%	5%	2%	0.39	
Monroe	5%	4%	3%	-3%	-0.73	
NY State	5%	3%				
At Least One Prior Arrest						
Kings	2%	2%	1%	0%	-0.31	Whites
Westchester	11%	12%	8%	-2%	-0.29	
Nassau	21%	15%	13%	-8%	-0.59	
Bronx	2%	1%	1%	-1%	-0.52	
Queens	4%	3%	2%	-1%	-0.48	
Suffolk	8%	9%	6%	-2%	-0.34	Whites
New York	2%	2%	1%	-1%	-0.55	
Other 52	8%	8%	8%	0%	-0.07	
Onondaga	10%	12%	7%	-3%	-0.36	
Erie	10%	11%	10%	0%	0.00	
Monroe	9%	8%	11%	2%	0.19	
NY State	8%	4%				

Pearson Chi Square: 4,916 on 3,143 Degrees of Freedom

*Only statistically significant effects are labeled.

5. Jail, Fines, and Discharges

The above analyses treated the sentencing decision as if it involved four separate decisions. This approach made it easy to control for differences in prior criminal records, concurrent felony arrests, arrest charges, convictions charges, and county of jurisdiction. It showed that when differences in the control variables were taken into account:

- Minorities were sentenced to jail more often than whites.
- Whites were fined more often than minorities.
- Minorities were sentenced to probation as often as whites.
- Minorities were discharged more often than whites in many counties.

The approach did not show how disparities in one sentencing decision were related to disparities in other sentencing decisions.

Disparities in sentencing decisions are presented in 8 scatter diagrams in Figure 7. The Y axis in each scatter diagram measures DPs on a scale ranging from -30% to +30%. (In comparison, the Y axes in the graphs for processing outcomes in Figure 6 ranged from -20% to +20%). The region above the zero line is shaded gray. It identifies outcomes that occurred more often to minorities than to whites. The region below the zero line is left white. It identifies outcomes that occurred more often to whites than to minorities. The X axis measures average incarceration DPs.

The letters in each scatter diagram represent DPs for each county. The percentages for most counties are displayed by the first letter of the county's name. Nassau County is identified by the letter A, New York County by the letter Y, and the 52 county aggregate by the number 5.

The graphs in Figure 7 show that disparities in sentencing decisions involved trade-offs between jail, fines, and discharge sentences. There were too few disparities in probation sentences to identify trade-offs.

Trade-offs between disparities in fine, discharge, and jail sentences depended upon the county's average incarceration DP and the defendant's prior arrest record. The counties with the lowest average incarceration DPs (Monroe, Erie, and Onondaga) primarily balanced disparities in fine sentences with disparities in discharge sentences. Whites were fined more often than minorities but minorities were discharged more often than whites. There were insignificant disparities in jail sentences for defendants without arrest records, and small but nevertheless significant disparities in jail sentences for defendants with arrest records.

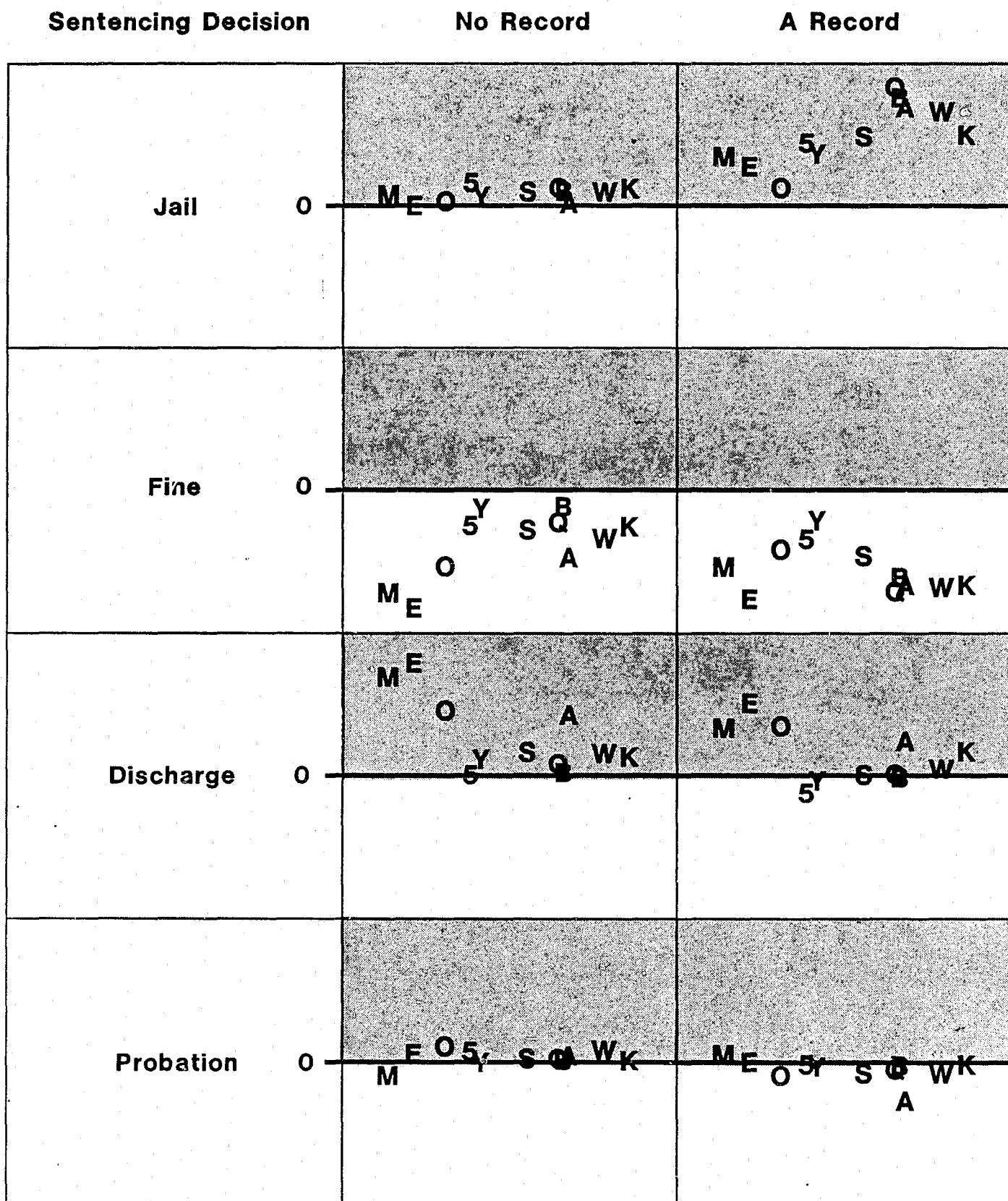


Figure 7: Scatter Diagrams of Disparity Percentages for Sentencing Decisions by Average Incarceration Disparity Percentages, NYS, 1985-1986

Trade-offs between disparities in fine, discharge, and jail sentences in the eight other counties depended upon the defendant's arrest record. Among defendants without arrest records, the largest disparities involved fine and discharge sentences. Whites were fined more often than minorities but minorities were discharged more often than whites. DPs for fines were slightly larger than DPs for discharge sentences. Minorities were sentenced to jail significantly more often than whites in seven of the eight counties.

Among defendants with arrest records, the largest DPs involved fine and jail sentences. Whites were fined more often than minorities but minorities were sentenced to jail more often than whites. The DPs for jail sentences were large and statistically significant in every county. Moderate DPs for discharge sentences favored minorities in Kings and Nassau Counties.

The DPs for defendants with arrest records illustrate typical differences in how comparably situated whites and minorities were sentenced. They do not necessarily illustrate differences in how comparably situated whites and minorities with serious prior criminal records were sentenced.

The analysis of trade-offs in sentencing disparities was done separately for defendants who had prior record scores ranging from 5 to 7 to ensure that the disparities in Figure 7 also occurred to defendants with serious prior records. This analysis demonstrated that the present findings held for defendants with serious prior records.¹⁷ The graphs of DPs for defendants with serious records were very similar to the graphs presented in Figure 7 for defendants that had at least one prior arrest.

In summary, the largest DPs for sentencing decisions involved fines. Whites were fined more often than minorities regardless of prior arrest record. The DPs for fine sanctions were primarily balanced by DPs for conditional discharge sentences for defendants without prior arrest records and by DPs for jail sentences for defendants with prior arrest records. Minorities without prior arrest records were discharged more often than similarly charged whites. Minorities with prior arrest records were sentenced to jail more often than similarly charged whites.

B. Sentence Lengths

The sentence lengths were examined for defendants who were sentenced to jail to learn if similarly situated whites and minorities were sentenced to the same time in jail. The average sentence for whites and minorities is classified by arrest charge, county, prior criminal record score, concurrent felony arrests, age, and gender in Table 24. This table shows that whites were sentenced to longer jail terms than minorities for

¹⁷ The logit model had an excellent fit to the observed data. Its Chi square equalled 1,449 on 1,276 degrees of freedom.

TABLE 24: Average Number of Days Sentenced to Jail by Arrest Charge, County, Prior Record Score, Related Felony Arrests, Age, Sex, and Minority Status, 1985-1986

		Average Jail Sentence in Days			Ratio of Sentences (M/W)
		Overall	White (W)	Minority (M)	
Arrest Charge					
A12	Order	60	63	50	.79
A12	Personal	59	64	54	.84
A6	Trespass/Tools	57	58	57	.98
A6	Fraud	52	62	41	.66
A6	Theft	50	55	48	.88
A6	Mischief	46	51	40	.79
A6	Order	43	49	38	.77
B	Bad Check	40	42	30	.70
B	Personal	38	40	37	.91
A6	Resisting Arrest	38	45	34	.76
A12	Weapons	34	44	31	.69
A12	Poss Ctld Subst	30	33	29	.86
B	Trespass	27	29	26	.89
B	Order	26	31	21	.68
A6	Drugs	26	34	25	.74
A6	Gambling	20	37	19	.50
B	Marihuana	20	20	20	1.00
NY State		42	50	39	.78
County					
Onondaga		107	109	103	.95
Nassau		91	74	99	1.34
Westchester		90	77	95	1.23
Erie		58	57	59	1.04
Suffolk		54	53	54	1.02
Other 52		54	52	59	1.13
Monroe		37	37	37	1.00
New York		34	31	34	1.11
Queens		30	37	29	.78
Bronx		23	22	23	1.07
Kings		21	17	22	1.25

TABLE 24: Average Number of Days Sentenced to Jail by Arrest Charge, County, Prior Record Score, Related Felony Arrests, Age, Sex, and Minority Status, 1985-1986

-continued-

	Average Jail Sentence in Days			Ratio of
	Overall	White (W)	Minority (M)	Sentences (M/W)
Prior Criminal Record Score				
0	25	32	20	.62
1	29	37	25	.67
2	31	40	26	.63
3	33	41	30	.72
4	40	49	36	.72
5	40	55	33	.59
6	44	59	38	.63
7	49	67	43	.64
8	51	60	50	.82
9	59	68	58	.85
10	63	86	56	.65
Related Felony Arrests				
None	39	47	36	.76
1	60	75	55	.73
2 or more	65	73	63	.85
Age at Arrest				
16-18	41	45	38	.83
19-24	42	51	38	.74
25-29	41	52	38	.74
30-40	44	50	42	.84
41-50	44	59	38	.64
51 +	40	42	38	.91
Gender				
Male	42	52	38	.73
Female	43	35	46	1.30

almost all categories of arrest charge, prior criminal record score, concurrent felony arrests, and age at arrest. Based upon statewide analyses, whites were sentenced to an average of 50 days and minorities were sentenced to an average of 39 days.

Comparisons of jail terms within counties showed a different pattern. In most counties, minorities were sentenced to longer terms than whites. This is opposite to the pattern found using statewide data. The statewide data suppressed differences found within counties. Most minorities were processed in counties that sentenced defendants to relatively short terms, whereas most whites were processed in counties that sentenced defendants to relatively long terms. For example, the average sentence length in Onondaga county was more than four times greater than the average sentence length in Kings County. When averaged across counties, whites appear to be sentenced to longer terms than minorities.

Regression models were used to estimate the effect that minority status had on sentence length. The models controlled for differences in arrest charges, conviction charges, prior criminal record scores, concurrent felony arrests, and county. The variables are described in Appendix C.

Twelve separate regression models were used to estimate disparities in setting sentence lengths. The models are summarized in Table 25. This table lists the arrest charges and counties used in each model. All but the first model were based upon a single arrest charge. The first model was based upon six arrest charges within the 52 county unit. There were not enough cases to analyze disparate sentencing practices for any of these charges in the other counties.

The significant regression parameters are presented in the last column of this table. They show the amount by which the average sentence for whites would have to be multiplied to equal the average sentence for comparably situated minorities. Coefficients greater than one show that minorities were sentenced to longer terms than whites. Coefficients less than one show that minorities were sentenced to shorter terms.

TABLE 25: Summary of 12 Regression Analyses of Jail Sentence Length, 1985-1986

Model Number	Arrest Charge	Number of Cases	Variance Explained	Counties in the Model	Significant Parameters: Description Value	
1	B Bad Check B Order B Personal A6 Fraud A6 Order A12 Order	623	49%	Other 52		
2	B Drugs	286	35%	Bronx Kings New York		
3	B Trespass	742	6%	New York		
4	A6 Resisting Arrest	945	46%	Bronx Kings New York Queens Nassau Suffolk Westchester Other 52		
5	A6 Drugs	1,385	32%	Bronx Kings New York Queens Other 52	No Prior Arrests	2.67
6	A6 Mischief	327	38%	Bronx New York Other 52		
7	A6 Trespass/ Tools	623	43%	Bronx Kings New York Queens Other 52	Prior Arrests	2.53
					Prior Arrests	1.63

TABLE 25: Summary of 12 Regression Analyses of Jail Sentence Length, 1985-1986

-continued-

Model Number	Counties Arrest Charge	Number of Cases	Variance Explained	in the Model	Significant Parameters: Description Value	
8	A6 Theft	6,452	43%	Bronx Kings New York Queens Erie Monroe Nassau Nassau Onondaga Suffolk Westchester Other 52	No Prior Arrests Prior Arrests No Prior Arrests No Prior Arrests	.19 1.54 .13 1.41
9	A6 Gambling	99	17%	New York		
10	A12 Poss Ctd Subst	2,624	41%	Bronx Kings New York Queens Nassau Westchester Other 52	No Prior Arrests	.60
11	A12 Personal	1,215	44%	Bronx Kings New York Queens Erie Monroe Nassau Suffolk Westchester Other 52	No Prior Arrests No Prior Arrests Prior Arrests No Prior Arrests	.24 .22 1.74 .11
12	A12 Weapons	254	42%	Kings New York Other 52		
Total		14,907				

The most striking feature of Table 25 is that relatively few parameters were statistically significant. Only 12 of the 116 parameters involving minority status were significant at the .05 level of significance. The significant parameters were not concentrated within any county nor were they associated with any particular arrest charge.¹⁸

In general, the analyses suggest that there were no disparities in setting sentence lengths. Minorities and whites who were arrested for the same charge, who were processed in the same county, who were convicted for the same charge, who had the same criminal history score, and who had the same concurrent felony arrests, were sentenced to similar periods in jail.

C. Fine Amounts

Fines were examined to learn if minorities and whites paid similar fines. The average fines for whites and minorities are classified by arrest charge, county, prior criminal record score, concurrent felony arrests, age, gender, and seriousness of the conviction charge in Table 26. The averages show that whites were fined slightly more than minorities. Overall, whites averaged \$96 and minorities averaged \$90. Whites averaged more than minorities in 15 out of 17 comparisons based upon arrest charge, in seven out of nine comparisons based upon county of jurisdiction, in nine out of 11 comparisons based upon prior criminal record score, in two out of three comparisons based upon concurrent felony arrests, and in four out of six comparisons based upon age group. Somewhat unexpectedly, minorities averaged more than whites in two out of four comparisons based upon conviction charge.

¹⁸ Another set of regression models were estimated to test whether the minority effects identified in Table 25 were biased due to restricting the analysis to defendants who were sentenced to jail. These models were based upon the experiences of all defendants. The sentence lengths for defendants who were not sentenced to jail were set to zero. The models included a variable that measured the probability of not being convicted. This variable was based upon the logit model of conviction. These regression models produced similar conclusions. They suggest that the minority effects in Table 25 were not affected by sample biases. Other tests could be made. See Richard A. Berk (1983) for a discussion of sample bias.

TABLE 26: Average Fine for Defendants Who Were Sentenced to a Fine by Arrest Charge, Prior Record Score, Concurrent Felony Arrests, Age, and Gender by Minority Status, 1985-1986

Variable	Overall	Average Amount of Fine		Ratio (M/W)
		Whites (W)	Minorities (M)	
NY State	\$94	\$96	\$90	.95
Arrest Charge				
A6 Gambling	\$213	\$240	\$202	0.84
A6 Drugs	\$127	\$128	\$126	0.90
A6 Fraud	\$112	\$117	\$102	0.87
A12 Order	\$110	\$107	\$140	1.31
A12 Poss Ctld Subst	\$104	\$117	\$89	0.76
A12 Personal	\$104	\$105	\$100	0.95
B Personal	\$103	\$108	\$91	0.84
A6 Resisting Arrest	\$101	\$107	\$87	0.81
A12 Weapons	\$99	\$105	\$91	0.87
B Order	\$98	\$101	\$87	0.86
A6 Order	\$95	\$100	\$83	0.83
A6 Mischief	\$90	\$92	\$82	0.90
A6 Trespass/Tools	\$89	\$94	\$83	0.88
B Marihuana	\$82	\$84	\$80	0.95
B Trespass	\$72	\$74	\$67	0.90
A6 Theft	\$72	\$77	\$63	0.82
B Bad Check	\$53	\$52	\$62	1.19
County				
Westchester	\$143	\$113	\$133	1.17
Queens	\$128	\$133	\$125	0.94
Suffolk	\$110	\$81	\$71	0.88
Bronx	\$108	\$133	\$103	0.78
Other 52	\$91	\$90	\$94	1.04
Nassau	\$81	\$68	\$62	0.91
Monroe	\$81	\$88	\$70	0.79
Kings	\$80	\$98	\$74	0.76
Onondaga	\$77	\$88	\$60	0.68
Erie	\$74	\$74	\$54	0.72
New York	\$70	\$79	\$66	0.84

TABLE 26: Average Fine for Defendants Who Were Sentenced to a Fine by Arrest Charge, Prior Record Score, Concurrent Felony Arrests, Age, and Gender by Minority Status, 1985-1986

-continued-

Variable	Overall	Average Amount of Fine Whites (W)	Minorities (M)	Ratio (M/W)
Prior Criminal Record Score				
0	\$86	\$88	\$80	0.90
1	\$94	\$97	\$90	0.93
2	\$97	\$98	\$96	0.99
3	\$107	\$109	\$104	0.95
4	\$112	\$112	\$111	1.00
5	\$110	\$120	\$99	0.83
6	\$113	\$117	\$108	0.92
7	\$123	\$136	\$112	0.82
8	\$123	\$129	\$120	0.93
9	\$117	\$102	\$123	1.22
10	\$96	\$105	\$89	0.85
Concurrent Felony Arrests				
None	\$93	\$95	\$89	0.94
1	\$111	\$115	\$109	0.95
2 or more	\$120	\$106	\$127	1.20
Age at Arrest				
16-18	\$72	\$76	\$63	0.83
19-24	\$89	\$94	\$79	0.85
25-29	\$97	\$101	\$90	0.89
30-40	\$101	\$102	\$101	0.98
41-50	\$117	\$111	\$126	1.14
51+	\$113	\$102	\$146	1.44
Gender				
Male	\$96	\$100	\$90	0.90
Female	\$83	\$78	\$94	1.21
Conviction Charge				
Violation	\$80	\$86	\$71	0.82
B	\$138	\$122	\$159	1.31
A6	\$133	\$122	\$157	1.29
A12	\$141	\$141	\$141	1.00

A regression model was used to learn whether whites and minorities who were arrested for the same charge, who had similar criminal histories, who had the same number of concurrent felony arrests, who had a similar conviction charge, and who were arrested in the same county, were sentenced to the same amount of fine. Disparities were estimated separately for defendants with and without prior arrest records in each county. The model used 22 coefficients to describe the relationships between minority status and fines. They show the amount by which the average fine for whites would have to be multiplied to equal the average fine for comparably situated minorities.¹⁹ Observed and modeled fines are presented in Table 27.

The table shows that in most counties, minorities were fined for less money than comparably situated whites. The largest disparities occurred in Kings, Erie, and Monroe Counties. In these counties, minorities were charged 20 to 30 percent less than comparably situated whites depending upon prior arrest records. In Westchester and in the 52 county aggregate, minorities were charged the same or slightly more than comparably situated whites.

The counties in Table 27 are ordered from high to low on average incarceration disparity percentage to learn if disparities on incarceration decisions were related to disparities in fine amounts. In general, there does not appear to be a simple relationship between these two measures of disparities. The largest disparities in fine amounts were found in counties that were high and in counties that were low on average incarceration DPs.

¹⁹The model contained 88 parameters. It explained 22 percent of the variance in the logarithm of fine amounts. The parameters included:

Number of Parameters	Parameters were used to estimate the effect of:
11	Any prior arrest within each county;
11	Prior record score within each county;
11	Concurrent felony indicators within each county;
10	Each county;
16	17 Arrest charges;
11	Minorities with no prior arrests within each county;
11	Minorities with prior arrests within each county;
6	Shift in seriousness from arrest to conviction charge;
1	Intercept term.

TABLE 27: Observed and Modeled Fines by Prior Arrest Record, Minority Status and County, 1985-1986*

County for:*	Observed Fine		Modeled Fines Minority (M)	Disparity Measure		Fines Were Higher
	White	Minority		Ratio	Difference	
	(W)			(M/W)	(W-M)	
No Prior Arrest Record						
Kings	\$97	\$61	\$66	0.69	-\$30	Whites
Westchester	\$128	\$140	\$129	1.01	\$1	
Nassau	\$78	\$66	\$74	0.95	-\$4	
Bronx	\$102	\$93	\$90	0.88	-\$12	Whites
Queens	\$115	\$103	\$103	0.90	-\$12	Whites
Suffolk	\$104	\$89	\$93	0.89	-\$12	Whites
New York	\$70	\$59	\$65	0.93	-\$5	Whites
Other 52	\$86	\$88	\$92	1.07	\$6	
Minorities						
Onondaga	\$79	\$62	\$67	0.85	-\$11	
Erie	\$71	\$55	\$49	0.70	-\$21	Whites
Monroe	\$80	\$63	\$60	0.75	-\$20	Whites
Total	\$80	\$88				
At Least One Prior Arrest						
Kings	\$99	\$85	\$81	0.82	-\$18	Whites
Westchester	\$150	\$162	\$152	1.01	\$2	
Nassau	\$104	\$98	\$94	0.90	-\$10	
Bronx	\$155	\$112	\$126	0.81	-\$29	Whites
Queens	\$156	\$153	\$140	0.90	-\$16	Whites
Suffolk	\$104	\$89	\$91	0.87	-\$14	Whites
New York	\$94	\$73	\$77	0.81	-\$18	Whites
Other 52	\$98	\$99	\$97	0.99	-\$1	
Onondaga	\$77	\$79	\$85	1.10	\$8	
Erie	\$85	\$67	\$64	0.76	-\$21	Whites
Monroe	\$90	\$76	\$75	0.84	-\$15	
Total	\$106	\$100				

*Only statistically significant effects are listed.

TABLE 27: Observed and Modeled Fines by Prior Arrest Record, Minority Status and County, 1985-1986*

County	Observed Fine		Modeled Fines Minority (M)	Disparity Measure		Fines Were Higher for:*
	White (W)	Minority		Ratio (M/W)	Difference (W-M)	
No Prior Arrest Record						
Kings	\$97	\$61	\$66	0.69	-\$30	Whites
Westchester	\$128	\$140	\$129	1.01	\$1	
Nassau	\$78	\$66	\$74	0.95	-\$4	
Bronx	\$102	\$93	\$90	0.88	-\$12	Whites
Queens	\$115	\$103	\$103	0.90	-\$12	Whites
Suffolk	\$104	\$89	\$93	0.89	-\$12	Whites
New York	\$70	\$59	\$65	0.93	-\$5	Whites
Other 52	\$86	\$88	\$92	1.07	\$6	Minorities
Onondaga	\$79	\$62	\$67	0.85	-\$11	
Erie	\$71	\$55	\$49	0.70	-\$21	Whites
Monroe	\$80	\$63	\$60	0.75	-\$20	Whites
Total	\$80	\$88				
At Least One Prior Arrest						
Kings	\$99	\$85	\$81	0.82	-\$18	Whites
Westchester	\$150	\$162	\$152	1.01	\$2	
Nassau	\$104	\$98	\$94	0.90	-\$10	
Bronx	\$155	\$112	\$126	0.81	-\$29	Whites
Queens	\$156	\$153	\$140	0.90	-\$16	Whites
Suffolk	\$104	\$89	\$91	0.87	-\$14	Whites
New York	\$94	\$73	\$77	0.81	-\$18	Whites
Other 52	\$98	\$99	\$97	0.99	-\$1	
Onondaga	\$77	\$79	\$85	1.10	\$8	
Erie	\$85	\$67	\$64	0.76	-\$21	Whites
Monroe	\$90	\$76	\$75	0.84	-\$15	
Total	\$106	\$100				

*Only statistically significant effects are listed.

VI. Possible Explanations

Disparities represent differences in how whites and minorities were processed that cannot be explained by selected variables. By definition, disparities are due to unmeasured variables, to incorrectly specified relationships among measured variables, and to unspecified relationships between measured and unmeasured variables. The study is concluded by defining discrimination, and by considering the impact that two unmeasured variables, racial discrimination and socioeconomic status, may have had on case processing decisions.

A. Discrimination

The literature on case processing frequently equates disparity with discrimination. For example, Kleck (1985), interpreted 57 case processing studies as either supporting or refuting racial discrimination in sentencing. This practice can lead to misunderstandings because discrimination is seldom defined. The following definitions are introduced to avoid misunderstandings.

Discrimination is an action. It is the denial of opportunities and equal rights to individuals because of their membership in particular racial and/or ethnic groups. (Levin and Levin, 1982) Discrimination that is attributable to individual prejudices (negative attitudes held by individuals toward entire categories of people) is called individual discrimination. Discrimination that is attributed to the "normal" operations of society's institutions is called institutional discrimination (Schaefer, 1984). Examples of institutional discrimination have been documented by Lizotte (1978), Farrell and Swigert (1978), and Albonetti et al (1989).

Institutional discrimination is difficult to measure because it depends upon the variables that are controlled to estimate disparities. Controlling for variables that have no legitimate influence on case processing can suppress the estimation of institutional discrimination. For example, differences due to socioeconomic status should normally be included in disparity estimates, not removed through the use of statistical controls.

B. Education and Institutional Discrimination

Researchers have not agreed with each other or even with themselves (some have been inconsistent from one time to another) concerning whether socioeconomic status should be controlled to estimate disparities in case processing. In 1983, Hagan and Bumiller argued that socioeconomic status should not be used as a control variable to study sentencing decisions. They noted that over 80 percent of the respondents in a public survey thought that being well-to-do should not influence sentencing. However, in 1984, Peterson and Hagan used education as a control variable to estimate disparities

for drug arrests. In 1983, Petersilia did not control for differences in socioeconomic status in her original analysis of disparities in case processing. However, in 1988, Klein, Turner, and Petersilia controlled for education, marital status, and employment in a replication of Petersilia's original research. No reason was given for controlling for socioeconomic status in the latter but not the former study.

Some of the disparities uncovered in sentencing decisions could be due to economic differences. In particular, the finding that whites were fined more often than minorities and that minorities were sentenced to jail more often than whites, could be due to differences in economic resources. These patterns could have arisen if the criminal justice system lacked options for sanctioning misdemeanants who had prior criminal records but who did not have the money to pay fines. Disparities resulting from these differences would represent institutional discrimination.

The possibility that disparities were due to differences in economic status was investigated by 1) comparing the percentage of defendants who had free counsel provided by the court, and 2) including a simple indicator of economic status in logit models of sentencing decisions in New York City. Both of these investigations provide partial information about whether differences in economic status can account for disparities in processing decisions.

The first investigation was undertaken to learn if minority defendants had fewer economic resources than white defendants, as reflected in the assignment of public defense counsel. This is a necessary but not a sufficient condition for demonstrating that disparities were due to differences in economic resources. This investigation could not be done for misdemeanor defendants though because counsel information was only available for indicted persons, and hardly anyone arrested for a misdemeanor crime was indicted. The analysis was made for indicted persons who were arrested for felony charges in 1985-1986. It assumes that differences in economic status for persons arrested for misdemeanor charges were similar to differences for persons arrested for felony charges. This investigation was performed in all counties.

The second investigation was undertaken to learn if differences in economic status could account for disparities in sentencing decisions. This analysis was limited to defendants arrested for misdemeanor charges in New York City who were held in jail before arraignment. Most, but not all, of these defendants were interviewed by the New York City Criminal Justice Agency (CJA). These interviews contained questions on work and telephone ownership that were combined to create a simple indicator of economic status. While this analysis could not be done for all defendants throughout the State, it does show the extent to which a simple indicator of economic status can account for sentencing disparities in counties that processed many of the minority defendants in the State.

1. Economic Status Measured by Free Legal Counsel

Even though economic indicators were not recorded in the CCH/OBTS file, the type of counsel (private vs provided free by the court) was recorded in the Indictment Statistical System (ISS) for persons who were indicted for felony crimes. Under New York State's Penal Law (Section 170.10), free counsel must be provided to defendants whom the court believes do not have the financial ability to provide their own counsel. The right of counsel is provided to all persons arrested for misdemeanor or felony crimes. It is not provided to persons arrested for traffic violators or penal law infractions.

The ISS was established in September, 1973 in response to the mandate of Section 837-A of the Executive Law of New York State.²⁰ Even though it was not mandated by law, a number of variables describing case processing were regularly collected by the ISS. In 1985 and 1986, eight of the 10 counties studied in this report recorded the type of attorney for at least 70 percent of all indicted defendants.

The assignment of counsel was not recorded for persons who were processed without indictments or superior court informations (SCIs). Indictments and SCIs were hardly ever used to prosecute misdemeanor crimes. This lack of data made it impossible to test directly whether minorities had counsel provided free of charge more often than whites among misdemeanor defendants. However, it was possible to indirectly test this proposition by comparing the type of counsel for indicted persons. The following comparisons assume that differences in economic status of white and minority defendants arrested for felony crimes were similar to differences in the economic status and white and minority defendants arrested for misdemeanor crimes.

Data from the CCH/OBTS data system were matched to data from the ISS system for defendants who were arrested for felony crimes. The analysis was limited to commonly occurring charges. The charges ranged from Class B violent felony offenses to Class E nonviolent felony offenses. The data set was created to analyze disparities in processing persons arrested for felony crimes.

The percentage of indicted defendants who had attorney information recorded in the ISS is presented in the last column of Table 28. Relatively few defendants had attorney information recorded in Kings (13%), Onondaga (6%), and Nassau (35%) Counties. These low reporting rates make it difficult to compare percentages in these counties.

²⁰ The law specifies that DCJS must "Collect and analyze statistical and other information and data with respect to the number of persons charged with commission of a felony by indictment or the filing of a superior court information, the felony with which persons were charged herein, the county within which the indictment or superior court information was filed, the disposition thereof including, but not limited to, as the case may be, dismissal acquittal, the offense to which the defendant pleaded guilty, the offense the defendant was convicted of after trial, and the sentence."

TABLE 28: Percentage of Defendants Who Had a Court Supplied Attorney Given that They Were Indicted for a Felony Crime by County, Prior Arrest Record, and Minority Status, New York State, 1985-1986

County	No Prior Arrests			1+ Prior Arrests			Predicate Felony Conviction			Cases with Attorney Information
	Minority	White	Difference	Minority	White	Difference	Minority	White	Difference	
Bronx	82%	58%	24%*	89%	84%	6%	91%	84%	6%	84%
Kings	86%	38%	48%*	84%	48%	35%*	87%	44%	43%*	13%
New York	79%	54%	25%*	91%	80%	12%*	93%	91%	2%	77%
Queens	45%	34%	11%*	56%	44%	12%*	57%	57%	0%	80%
Erie	71%	33%	39%*	72%	66%	6%	86%	81%	4%	71%
Monroe	44%	31%	13%*	57%	49%	8%	58%	55%	3%	83%
Nassau	66%	27%	39%*	79%	61%	18%*	84%	79%	5%	35%
Onondaga	80%	63%	17%	100%	63%	38%	No Data	33%	No Data	6%
Suffolk	40%	17%	22%*	60%	35%	25%*	67%	67%	0%	94%
Westchester	51%	23%	28%*	67%	54%	13%*	65%	71%	-7%	95%
Other 52	64%	52%	12%*	73%	67%	6%*	75%	72%	3%	86%

*Difference is statistically significant at the .05 level of significance.

The percentages in Table 28 are presented for three levels of prior record: 1) no arrests in the ten years preceding the instant offense; 2) one or more arrests but no felony convictions in this period; and 3) at least one felony conviction in this period. By law, defendants with felony convictions in the ten year period preceding arrest can be sanctioned more seriously than defendants without felony convictions. Defendants with predicate felony convictions must be sentenced to prison if they are convicted of a felony crime, and they can be sentenced to longer terms than defendants without predicate convictions.

Table 28 demonstrates that free counsel was related to prior record and minority status. Minorities received free counsel more often than whites, and defendants with serious records received free counsel more often than defendants without records. Differences between whites and minorities were largest (and almost always significantly greater than zero) for defendants without prior arrests. They were smallest (and almost always not significantly greater than zero) for defendants with predicate felony convictions.

I believe that the relationships between economic status, prior criminal record, and minority status for felony arrests can be applied to misdemeanor arrests. Using these relationships suggests that minorities arrested for misdemeanor charges had fewer economic resources than whites; that the greatest differences in economic resources occurred to defendants without prior arrest records; and that the smallest differences in economic resources occurred to defendants with extensive criminal records. These patterns suggest that differences in economic status were largest and therefore most capable of accounting for differences in case processing decisions for persons without arrest records. Unfortunately, the largest disparities (measured by differences in standardized percentages) occurred to defendants with prior arrest records. This misalignment suggests that economic differences may not be able to account for all disparities uncovered in this report.

2. Disparities Attributable to Differences in Economic Resources

The finding that minorities had fewer economic resources than whites throughout the State is a necessary but not a sufficient reason for believing that disparities can be attributed to differences in economic resources. The only way to attribute disparities to differences in economic status is to measure economic status and model how it affects case processing decisions.

The impact that economic status had on sentencing decisions was modeled for defendants held in jail before arraignment in the four most populous counties of New York City. This analysis shows the extent to which disparities in sentencing decisions could be due to simple differences in economic resources. Economic data were not available for persons who were released before arraignment in New York City, nor were they readily available for persons who were arrested in other parts of the State.

Unfortunately, not all defendants in New York City were interviewed by the CJA. Following arrest, defendants were brought to local police stations. Defendants arrested for misdemeanor crimes could be fingerprinted at the station and released on desk appearance tickets. Police gave desk appearance ticket to persons they thought would appear for arraignment hearings. Police took the other defendants to a central booking location in New York City. Here they were fingerprinted, strip searched, interviewed by the CJA, and held in jail until arraignment. Defendants who were given desk appearance tickets had most of their case processing variables recorded by the CJA. However, hardly any of them were interviewed by the CJA.

The CJA data were matched with CCH/OBTS data for defendants who were arrested for misdemeanor crimes in the four largest counties of New York City. Arrests were matched by comparing criminal identification numbers and arrest dates. Cases were considered to match when they had exactly the same arrest date and identification number. Eighty percent of the cases in the CCH/OBTS data set had an exact match with cases in the CJA data set. Whites and minorities had the same rate of matching in each county.

The matched data set showed that whites received desk appearance tickets more often than minorities. Among defendants without prior arrests, 56 percent of the whites and 48 percent of the minorities received desk appearance tickets. Among defendants with prior arrests, 40 percent of the whites and 32 percent of the minorities received desk appearance tickets.

Interview data were available for 89 percent of the defendants who did not receive desk appearance tickets.²¹ A simple economic indicator was created by assigning one point for having a telephone, and one point for either having a job, going to school, or being enrolled in job training. This produced a scale ranging from zero to two.

The percentage of defendants having each scale value is presented by minority status and prior arrest record in Table 29. These percentages are expected to underestimate the economic status of all arrested persons because they were calculated for persons who were not given desk appearance tickets. Even with this bias, Table 29 shows that whites had higher economic status than minorities, and that persons without prior arrests had higher economic status than persons with prior arrests. Minorities were almost twice as likely as whites to have a score of zero (no phone and not employed or enrolled in school or job training). Conversely, whites were almost twice as likely as minorities to have a score of two (had a phone and was employed, or enrolled in school or job training). Defendants with prior arrests were considerably more likely than defendants without prior arrests to have a score of zero, and they were considerably less likely to have a score of two.

²¹ Interview data were available for .3 of one percent of the defendants who received desk appearance tickets.

TABLE 29: Economic Status by Prior Arrests and Minority Status, New York City, CJA Data Set, 1985-1986

Economic Status	No Prior Arrests		1+ Prior Arrests	
	Whites	Minorities	Whites	Minorities
0	15%	29%	34%	40%
1	36%	39%	40%	40%
2	49%	32%	36%	19%
Number of Defendants	5,017	15,550	4,004	23,263

The impact of not controlling for differences in economic status in earlier analyses was estimated by comparing the size of minority status parameters in logit models that ignored differences in economic status to the size of minority status parameters in logit models that included effects of economic status. Differences in the size of the minority status parameters show the extent to which disparities can be explained by differences in economic status. The logit models were constructed for defendants who were convicted of a crime and not sentenced to time served. One analysis focused upon sentences to jail and one focused upon sentences to fines.

Models that included economic status did a significantly better job of describing the data than models that ignored economic status.²² The reason for the improvement is evident in Tables 30 and 31. These tables display the percentage of defendants who received sentences to fines (Table 30) or to jail (Table 31) by minority status. These tables show that the type of sentence covaried with economic status for defendants with prior arrest records. Among these defendants, persons with a score of two were fined more often but sentenced to jail less often than persons with a score of one, and persons with a score of one were fined more often but sentenced to jail less often than persons with a score of zero. Similar but less strong patterns occurred for persons without prior arrest records.

²² The contribution of economic status can be described by subtracting the Pearson chi square test statistics for the models that included economic status (2,271.3 for fines and 2,339.3 for jail; both on 1,901 degrees of freedom) from the chi square statistics for the models that excluded economic status (2,784.7 for fines and 2,621.9 for jail). These differences equalled 513.4 on 8 degrees of freedom for the analysis of fines and 382.6 on 8 degrees of freedom for the analysis of jail sentences. Eight degrees of freedom were used to estimate the effects of economic status. Two coefficients (one for defendants with and one for defendants without prior arrest records) were estimated in each of the four counties.

TABLE 30: Observed and Modeled Percentages of Defendants Who Were Sentenced to Fines and Amount of the Disparity Percentage that Could Be Explained by Economic Differences for Defendants Who Were Sentenced to Jail, Fines, Probation or Discharge by Minority Status, Prior Arrest Record, Economic Status, and County, CJA Matched Data Set, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	DPs Explainable by Economic Differences	
	White (W)	Minority			Amount	Percentage
No Prior Arrests						
Economic Status: 0						
Bronx	57%	49%	45%	-12.2%	-1.6%	13%
Kings	65%	48%	53%	-11.7%	-3.4%	29%
New York	12%	9%	9%	-3.8%	-1.6%	41%
Queens	43%	42%	37%	-5.5%	-0.4%	8%
Total	30%	29%				
Economic Status: 1						
Bronx	61%	50%	49%	-12.1%	-1.6%	13%
Kings	51%	54%	39%	-12.0%	-3.3%	27%
New York	16%	14%	11%	-4.8%	-2.0%	41%
Queens	52%	56%	46%	-5.7%	-0.5%	8%
Total	34%	38%				
Economic Status: 2						
Bronx	59%	56%	47%	-12.2%	-1.6%	13%
Kings	68%	58%	57%	-11.3%	-3.3%	29%
New York	27%	21%	19%	-7.2%	-3.0%	42%
Queens	58%	51%	52%	-5.7%	-0.5%	8%
Total	44%	42%				
Weighted Average						27%
1+ Prior Arrests						
Economic Status: 0						
Bronx	52%	29%	33%	-18.3%	-3.3%	18%
Kings	44%	26%	21%	-23.2%	-2.9%	13%
New York	8%	7%	5%	-3.1%	-0.8%	27%
Queens	28%	24%	13%	-15.1%	-1.6%	11%
Total	23%	17%				
Economic Status: 1						
Bronx	50%	41%	32%	-18.2%	-3.2%	18%
Kings	58%	35%	31%	-26.2%	-3.7%	14%
New York	17%	13%	11%	-6.0%	-1.6%	27%
Queens	55%	38%	31%	-23.5%	-3.1%	13%
Total	40%	28%				
Economic Status: 2						
Bronx	68%	47%	50%	-18.1%	-3.6%	20%
Kings	68%	44%	42%	-26.2%	-4.1%	16%
New York	34%	20%	24%	-9.9%	-2.9%	29%
Queens	64%	45%	40%	-23.9%	-3.4%	14%
Total	54%	34%				
Weighted Average						21%

TABLE 31: Observed and Modeled Percentage of Defendants Who Were Sentenced to Jail and Amount of the Disparity Percentage that Was Due to Economic Differences for Defendants Who Were Sentenced to Jail, Fines, Probation or Discharge by Minority Status, Prior Arrest Record, Economic Status, and County, CJA Matched Data Set, 1985-1986

County	Observed Percentage		Modeled Percentage Minority (M)	Disparity Percentage (M - W)	DPs Explainable by Economic Differences	
	White (W)	Minority			Amount	Percentage
No Prior Arrests						
Economic Status: 0						
Bronx	0%	11%	??	?	?	?
Kings	0%	9%	?	?	?	?
New York	6%	6%	10%	4.0%	1.1%	27%
Queens	7%	13%	21%	13.6%	1.6%	12%
Total	4%	8%				
Economic Status: 1						
Bronx	2%	6%	10%	8.2%	1.1%	14%
Kings	10%	7%	14%	4.0%	1.3%	33%
New York	1%	4%	2%	0.7%	0.2%	28%
Queens	2%	6%	8%	5.2%	0.7%	13%
Total	3%	5%				
Economic Status: 2						
Bronx	1%	5%	7%	6.1%	0.9%	14%
Kings	3%	5%	5%	1.5%	0.5%	33%
New York	2%	3%	3%	1.4%	0.4%	28%
Queens	1%	4%	2%	1.3%	0.2%	14%
Total	2%	4%				
Weighted Average						23%
1+ Prior Arrests						
Economic Status: 0						
Bronx	33%	50%	59%	26.0%	3.7%	14%
Kings	25%	42%	46%	21.8%	3.6%	17%
New York	41%	50%	52%	11.1%	1.7%	16%
Queens	47%	58%	77%	30.8%	2.6%	8%
Total	37%	49%				
Economic Status: 1						
Bronx	14%	37%	32%	18.2%	3.2%	18%
Kings	17%	32%	36%	18.3%	3.3%	18%
New York	28%	38%	38%	9.8%	1.6%	17%
Queens	13%	41%	36%	23.6%	3.2%	14%
Total	20%	37%				
Economic Status: 2						
Bronx	7%	24%	19%	11.6%	2.2%	19%
Kings	10%	22%	23%	12.7%	2.5%	20%
New York	12%	29%	17%	5.6%	1.0%	18%
Queens	7%	28%	23%	15.6%	2.4%	15%
Total	10%	26%				
Weighted Average						16%

*Modeled percentage for minorities and disparity percentages could not be calculated because 0 percent of the whites were sentenced to jail.

Logit parameters for models describing sentencing decisions are presented in Table 32. The first set of minority parameters, identified as model H0, were taken from the original analysis of sentencing decisions presented in Tables 20 and 21. The second set of minority parameters, identified as model H1, were taken from the matched data set. Both models H0 and H1 used the same parameters to estimate disparities in the four New York City Counties. Neither model included effects for differences in economic status.

TABLE 32: Logit Parameters for Sentences to Fines and Sentences to Jail, CJA Matched Data, 1985-1986

County	Sentenced to a Fine Prior Arrests		Sentenced to Jail Prior Arrests	
	0	1+	0	1+
Model H0: CCH/OBTS Data Set Without Economic Status				
Minority Parameters				
Bronx	-0.14*	-0.74	1.15	1.24
Kings	-0.31	-0.82	0.79	0.96
New York	-0.18	-0.36	1.01	0.57
Queens	-0.27	-0.87	1.24	1.33
Model H1: Matched CJA Data Set Without Economic Status				
Minority Parameters				
Bronx	-0.49	-0.76	1.89	1.07
Kings	-0.49	-1.08	0.38*	0.97
New York	-0.41	-0.49	0.59	0.45
Queens	-0.23*	-0.98	1.22	1.37
Model H2: Matched CJA Data Set With Economic Status				
Minority Parameters				
Bronx	-0.43	-0.61	1.76	0.92
Kings	-0.36	-0.92	0.27*	0.83
New York	-0.23	-0.34	0.45*	0.38
Queens	-0.21*	-0.84	1.12	1.22
Economic Parameters				
Bronx	0.27	0.50	-0.47	-0.55
Kings	0.45	0.52	-0.34	-0.43
New York	0.56	0.60	-0.39	-0.43
Queens	0.27	0.59	-0.61	-0.67

*Parameter was not significantly different from zero.

Differences in the size of the parameters in models H0 and H1 are due to differences in how cases were selected for each analysis. Table 32 shows that parameters for defendants with arrest records in model H0 were very similar to parameters in model H1. However, this was not the case for defendants without arrest records. The lack of a close correspondence between parameters suggests that the selection process that produced the CJA data set may have been related to the disparities that were found in the CCH/OBTS data set. This means that conclusions for defendants without prior arrest records should be viewed as tentative until more complete data sets can be analyzed.

The next set of minority parameters, denoted model H2, were estimated from the CJA data set that included economic status as an independent variable. Table 30 shows that adding economic status reduced the size of the minority parameters in model H1.

The relative importance of economic status compared to minority status can be gauged by counting the number of significant parameters and by comparing their relative magnitude. Model H2 contains 16 economic parameters. All 16 were statistically significant. It also contains 16 minority parameters. All but two were statistically significant.

Table 32 shows that the effect of minority status was larger than the effect of economic status for comparisons based upon one unit shifts in the economic scale in 12 out of 16 comparisons. However, it was smaller than the effect of economic status for comparisons based upon two unit shifts in the economic status in 15 out of 16 comparisons.²³ It appears pointless to try to decide which variable was more strongly related to disparities in case processing. Both minority status and economic status affected sentencing decisions. The relative importance of each variable depends upon how many levels are used to measure economic status.

Even though it is difficult to decide which variable was more closely linked to disparities in case processing, it is possible to show how much of the disparity estimated in model H1 can be attributed to the economic differences estimated in model H2. The disparity percentages estimated in Model H1 are presented in the 5th column of Tables 30 and 31. The amount of these percentages that can be attributed to the economic status measured in Model H2 is presented in the 6th column.²⁴ The percentage of the disparity percentage in model H1 that is attributable to differences in economic status is presented in the 7th column. This column shows that from 8 to 42 percent of the disparity estimated in model H1 (as reflected in disparity percentages) could be attributed to differences in economic status.

²³ The economic parameters listed in Table 32 illustrate the effect of having a score of one instead of a score of zero, or of having a score of two instead of a score of one. The effect of having a score of two instead of a score of zero equals twice the listed coefficient.

²⁴ These amounts were calculated by subtracting the disparity percentages estimated in models H1 and H2.

The weighted averages in Tables 30 and 31 summarize the percentages in column 7.²⁵ They show that about 25 percent of the size of the disparity percentages could be attributed to unmeasured differences in economic status. The average amounts due to differences in economic status were higher for sentences to fines than for sentences to jail, and were higher for defendants without than for defendants with prior arrest records.

3. Summary of Differences in Economic Status

Economic status was linked to minority status and arrest record. Minorities had fewer economic resources than whites. The largest differences in economic resources were found for defendants without prior arrest records. The smallest differences were found for defendants with extensive records. Most defendants with extensive criminal records were poor.

About one-fourth of the size of the disparity percentages estimated in sentencing decisions could be attributed to simple differences in economic status. This means that three-quarters of the size of the disparity percentages could not. It is doubtful that all disparities uncovered in this research were due to unmeasured differences in the economic resources.

The disparities that were associated with differences in economic status could represent class biases of judges and attorneys and/or institutional discrimination. Institutional discrimination could have arisen if judges and district attorneys believed that persons who had criminal records should be punished, that probation, conditional discharge, and unconditional discharge represented breaks rather than punishments; and that moderate fines and jail sentences represented real punishments. The question for the criminal justice system may be how should persons who have prior records but lack money to pay fines be punished?

C. Individual Discrimination and Prejudices

The finding that differences in economic status can account for one-fourth of the disparity in sentencing decisions does not mean that prejudicial attitudes of prosecutors, defense attorneys, and judges can account for three-fourths of the disparities. The only way to attribute disparities to individual prejudices is to measure prejudices and test whether they are related to disparities.

²⁵ The averages in Tables 30 and 31 were weighted by the proportion of minorities that were represented in each county economic status group. The weights were defined to sum to one for defendants without prior arrests and to sum to one for defendants with prior arrests.

Very few researchers have correlated prejudices of persons working in the criminal justice system with disparities in case processing. Green (1961) estimated disparities in sentencing decisions for specific judges and district attorneys. Without directly measuring prejudices, he concluded that judges processed cases without racial prejudices. Castberg (1971) tried but failed to get judges to rank ethnic groups on a social distance scale. Gibson (1978) got 11 judges to answer simple questions on racial prejudices. Uhlman (1978) estimated the effect of the judge's race upon sentencing decisions. He did not, however, directly measure prejudicial attitudes.

Some of the problems with making inferences to individual prejudices are illustrated by Gibson's research. He analyzed incarceration decisions for persons who were indicted for serious misdemeanor or felony charges in Fulton County Georgia. He showed that minorities were no more likely to be incarcerated than whites once differences in charge and prior record were taken into account. This did not mean that there were no disparities in case processing decisions. Controlling for charge seriousness and prior record, he found that some judges favored whites while other judges favored minorities. In other words, the finding that whites and blacks were sentenced in similar ways overall does not necessarily mean that race was unrelated to sentencing decisions for all judges.

The real surprise came when Gibson tried to account for the disparities observed for each judge. He found that racial prejudices were not closely related to disparities. Instead, disparities were closely related to how important judges viewed prior criminal records. Judges who sentenced blacks more harshly than whites put more importance on prior record variables than judges who sentenced whites more harshly than blacks. In other words, what appeared to be individual discrimination driven by prejudice may have been institutional discrimination generated by philosophical differences on how "legitimate" variables should affect sentencing decisions.

In general, Gibson's work demonstrates that it is unreasonable to believe that disparities are necessarily caused by prejudicial attitudes. Persons who believe that the disparities in this research are due to prejudices are invited to develop a theory of prejudice to explain why minorities were sentenced to conditional discharge more often than whites; why minorities were sentenced to smaller fines than whites; and why minorities were sentenced to the same length of imprisonment as whites.

D. Summary

Disparities do not appear to be completely explainable by blatant prejudices or by differences in economic status. Disparities could be due to subtle expressions of prejudices, to false perceptions of economic status, to differences in socioeconomic status, to combinations of prejudices and differences in economic resources, to incorrectly specified relationships between measured variables, and to unmeasured variables that were linked both to minority status and case processing outcomes.

VII. Discussion

This study was undertaken to learn why minorities were sentenced to jail more often than comparably charged whites. It attempted to trace disparities to particular decisions that occurred between arrest and final disposition. It showed that disparities in one decision were frequently entangled with disparities in other decisions. The study is concluded by reviewing the major disparities and suggesting how they can be reduced.

A. Major Findings

The analyses show that:

- Minorities were sentenced to jail or time served more often than comparably situated whites. DPs were particularly large for defendants with arrest records. They occurred in virtually every county that processed enough white and minority defendants to estimate disparities.
- DPs for incarceration outcomes differed by arrest charge. Disparities were most likely to affect persons who had prior arrest records and who were arrested for weapons, criminal trespass, possession of burglar tools, theft, possession of a controlled substance, or resisting arrest charges. They were least likely to affect defendants who were arrested for aggravated harassment, endangerment of a child, gambling, menacing, sexual abuse, and bad check charges.
- Minorities had their cases dismissed more often than whites in counties with the lowest average incarceration DPs.
- Whites had their cases dismissed by ACD dispositions more often than minorities in several counties. This resulted in minorities being convicted more often than whites.
- DPs for ACD dispositions were not related to average incarceration DPs. That is, the larger ACD disparities did not necessarily occur in counties with the larger average incarceration disparities.
- Among convicted defendants with prior arrest records, whites had their charges reduced more often than comparably charged minorities. DPs for charge reductions were related to average incarceration DPs. That is, the larger charge reduction disparities tended to occur in counties with the larger average incarceration disparities.
- Convicted minorities were sentenced to jail more often than convicted whites. DPs were especially large for defendants who had arrest records.

- There were no disparities in setting the length of jail sentences.
- Convicted whites were sentenced to pay fines more often than convicted minorities.
- Minorities were sentenced to pay lower fines than comparably situated whites in about half of the counties tested.
- Convicted minorities were sentenced to probation as often as convicted whites.
- Convicted minorities were sentenced to discharge more often than convicted whites. The disparities were especially large for defendants who did not have arrest records.
- Among convicted defendants without arrest records, disparities in fine sentence were primarily balanced by opposite disparities in conditional discharge sentences.
- Among convicted defendants with arrest records, disparities in sentences of fines were balanced by disparities in sentences to jail in all but the three counties with the lowest average incarceration DPs. In these counties, disparities in fines were primarily balanced by disparities in discharge sentences.
- Some but not all of the disparity percentages appear to be due to differences in economic resources. Whites had more economic resources than minorities. The largest differences in resources were found for defendants without arrest records. The smallest differences were found for defendants with extensive criminal records.
- In New York City Counties, differences in economic resources accounted for one-fourth of the disparity percentages in sentencing decisions for defendants who were held in jail before arraignment.
- Disparities do not appear to be attributable to blatant forms of prejudice.

B. Policy Recommendations

Even without knowing what caused disparities, it may nevertheless be possible to suggest ways to help ensure that minorities are treated fairly by the criminal justice system. The largest and most consistent disparities in case processing involved fines. Whites were fined much more often than comparably situated minorities. Among persons without arrest records, disparities in fine sentences were balanced by disparities in conditional discharge sentences. Among persons with arrest records, disparities in fine sentences were balanced by disparities in jail sentences. These patterns suggest that disparities might be reduced by developing methods for fining defendants who have limited economic resources. In particular, methods appear to be needed to sanction defendants who have criminal records but who have little or no money to pay fines.

Two existing programs in New York State could address these problems. The Staten Island Economic Sanctions Project was designed to make fines more equitable by setting them proportional to income. The state-funded Alternatives to incarceration Program was designed to decrease overcrowding in jails and prisons by offering alternatives to incarceration. Even though these programs were not designed to reduce disparities, they could reduce disparities by increasing the number of alternatives to incarceration.

1. Day-Fines

The Staten Island Economic Sanctions Project was undertaken by the Vera Institute of Justice to demonstrate that fines could be set proportional to offender income in American courts. Under the day-fine system, offenders are sentenced to a certain number of day-fine units according to the gravity of the offense. The value of each unit is set in accord to each defendant's daily income. Hence, the name "day-fine". The total fine is determined by multiplying seriousness units by average daily income.

The Staten Island day-fine study began in August of 1988 and ran for one year. During this period, day-fines were used to sanction 267 offenders in Richmond County. The project demonstrated that day-fines could be applied to a variety of offenders.

Judith Greene, Director of Court Programs at the Vera Institute, suggested that meaningful fines can be levied against poor offenders. She stated that day-fines were successfully applied to offenders on welfare by using a part of their welfare payment to pay fines.²⁶ This suggests that disparities in sentencing decisions could be reduced by encouraging judges, district attorneys, and defense attorneys to recommend fines in some cases where they otherwise would recommend incarceration.

²⁶ Greene made this statement in the sixth "Symposium on Criminal Justice Research in New York State" held at the State University of Albany on July 26, 1990. The symposium was organized to describe disparities in case processing and to suggest how they might be reduced.

One problem with implementing the day-fine system is that statutory caps on fines limit the amount that can be levied against many offenders. (Greene, 1989) Removing the caps would enable courts to generate enough revenue from fines to pay for the interviews needed to establish offender income levels. Information from these interviews could also be used to learn to what extent disparities in case processing are due to differences in economic resources.

2. The Alternatives to Incarceration Program

The Classification/Alternatives bill was enacted in 1984 to reduce overcrowding in county jails and state prisons. The bill was designed to reduce both pre and post trial incarceration by increasing the sanctions and treatment programs that could be offered to offenders who otherwise would spend time in jail.

The bill encourages counties to develop their own programs. Under the bill, service plans are submitted by county advisory boards. These boards are comprised of a chief corrections office, a county executive, a county court judge, a police court judge, the district attorney, a representative from each agency providing legal services to those unable to afford counsel in criminal cases, a county legislator, and a county director of probation.

The alternatives program supports pretrial release services, community service sentences, defender-based advocacy programs, and specialized alternatives to incarceration programs. Specialized programs have focused upon particular groups of defendants, including alcohol and drug dependent offenders, probation violators, street crime offenders, women offenders, developmentally disabled offenders, non-violent sex offenders, and chronically mentally ill offenders. Two programs focused upon home confinement. By January of 1989 over 100 programs were funded by the alternatives programs. Forty-nine counties had intensive supervision programs.

The alternatives program could become the State's laboratory for designing, testing, and implementing programs to reduce disparities in case processing. The program links criminal justice practitioners in county offices with researchers and policy makers in state offices. It encourages practitioners to generate ideas for reducing the rate of incarceration. These ideas reflect unique conditions in each county. Researchers could be encouraged to evaluate the impact that these programs have upon disparities in case processing. These evaluations could be used to develop new programs throughout the state.

3. Recommendations

The study documented widespread disparities in post-arrest case processing of persons arrested for misdemeanor crimes, and identified the counties, arrest charges, criminal records, and processing decisions for which disparities were most likely to occur. The largest disparities involved fines and jail sentences for persons with prior arrest records. The tendency to fine whites but to incarcerate minorities suggests that the criminal justice system failed to provide non-incarcerative sanctions to persons who had prior records and who lacked or who were perceived to lack money to pay fines. This suggests that disparities in case processing can be reduced by developing alternatives to incarceration and/or by developing new ways to fine poor defendants. In particular, the day-fine system represents a promising method for reducing disparities in sentencing decisions.

The study also demonstrated that disparities in ACD decisions, case dismissals, convictions, and plea bargains varied by county. This variability suggests that no single statewide program can be designed to effectively reduce disparities in all counties. Much of the responsibility for diagnosing the causes of disparities and for developing strategies to alleviate them lies with local criminal justice officials. These persons are in a much better position to interpret the disparities uncovered in this research than are state officials.

Disparities must be systematically measured over time to ensure that all persons are processed equitably. Comparisons of disparities across time and location are needed which measure both the extent of disparities and the effectiveness of programs designed to reduce them. The responsibility for measuring disparities should rest primarily with state officials.

Specific recommendations include:

- The Division of Criminal Justice Services and the Division of Probation and Correctional Alternatives should host a conference for county advisory boards. These boards should be asked to develop guidelines for sanctioning persons who have criminal records but who do not have enough economic resources to pay fines.
- The Division of Criminal Justice Services should publish a set of indices that measure disparities in processing outcomes and sentencing decisions for misdemeanor arrestees. At a minimum, the indices should measure disparities in ACD dispositions, plea bargaining decisions, sentences to jail, and sentences to fines. The indices should be released yearly.

- A day-fine project should be implemented in at least one of the major counties of New York City and in at least one major county outside of New York City. These programs should be evaluated to learn whether day-fines can effectively decrease disparities in the processing of misdemeanor arrestees.
- The evaluation component of the Alternatives to Incarceration Program should be strengthened. The Alternatives to Incarceration statute should be modified to require large scale demonstration programs to evaluate their impact on disparities in case processing.
- Information on the conditions imposed in conditional discharge sentences should be maintained at a central site. There is currently no way for state-level analysts to assess the severity of these sanctions.
- Pretrial incarceration data should be maintained at a central site. There is currently no easy way for state-level analysts to monitor disparities in pretrial incarceration.

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IX. Appendices

Appendix A: Case Characteristics

The relationships between minority status and arrest charge, prior criminal record, age, and gender were examined by county to learn which variables should be included in the logit models. The comparisons showed that the relationship between minority status and each variable frequently differed by county. Relationships based upon data aggregated to the state level did not necessarily describe relationships found within any county.

1. Arrest Charge by County

The percentage of arrests are classified by crime type, seriousness level, and county in Table A1. The crime types are grouped by how well they distinguished the type of crime in New York City Counties from the type of crime in other counties. The table shows that New York City Counties were characterized by relatively high levels of drug crimes and by relatively low levels of order, property, and fraud crimes. Most of the gambling arrests in the State occurred within the New York City Counties.

The most noticeable difference in crime types by county occurred for drug arrests. Thirty-seven percent of the defendants in New York County but less than 4 percent of the defendants in Monroe and Onondaga Counties were arrested for drug crimes. These huge differences were unexpected because all of these counties were urban or had large urban centers.

Table A1 also shows that the seriousness of the arrest charges differed by county. The counties in New York City had a higher percentage of the most serious arrest charges (A12) than did the other counties. Suffolk County had an unusually high percentage of the least serious arrest charges.

2. Arrest Charge by Minority Status

The number and percentage of white and minority defendants are classified by arrest charge, charge seriousness, and crime type in Table A2. The third column in the crime type section of the table shows that misdemeanor arrests were most often based upon theft, personal or drug charges. The third column in the charge seriousness section shows that misdemeanor arrest most often had a maximum sentences of 6 months in jail.

TABLE A1: Percentage of Defendants by Crime Type, Seriousness Level, and County, 1985-1986

Crime Type or Seriousness	NY	NYC Counties					Other Counties					
	State	Bronx	Kings	New York	Queens	Erie	Monroe	Nassau	Onondaga	Suffolk	Westchester	Other52
Crime Type												
Crimes that Distinguish NYC Counties from Other Counties												
Drugs	20%	30%	28%	37%	23%	10%	3%	16%	4%	22%	21%	6%
Order	7%	4%	4%	4%	5%	11%	9%	7%	10%	9%	6%	11%
Property	6%	4%	4%	2%	4%	7%	9%	6%	7%	8%	7%	8%
Fraud	5%	1%	1%	1%	2%	4%	9%	2%	5%	4%	3%	11%
Gambling	1%	4%	3%	2%	2%	0%	0%	0%	1%	0%	1%	0%
Crimes that Do Not Distinguish NYC Counties from Other Counties												
Theft	32%	23%	27%	33%	25%	36%	38%	33%	43%	21%	34%	34%
Personal	15%	16%	15%	9%2	1%	15%	21%	16%	16%	17%	14%	17%
Escape & Misc	6%	7%	5%	4%	7%	8%	5%	7%	6%	10%	5%	5%
Burglary	5%	5%	5%	4%	6%	5%	4%	8%	6%	7%	6%	5%
Weapons	3%	4%	6%	3%	5%	3%	2%	3%	2%	3%	2%	3%
Seriousness Level												
B	14%	10%	10%	11%	11%	14%	16%	13%	14%	25%	13%	18%
A6	55%	54%	54%	52%	52%	62%	60%	57%	64%	49%	57%	56%
A12	31%	36%	36%	37%	37%	24%	24%	30%	22%	26%	31%	26%

TABLE A2: Number and Percentage of Defendants Classified by Minority Status, Arrest Charge, Charge Seriousness, and Crime Type, 1985-1986

Arrest Charge	Number of Defendants		Percentage of All Charges	Percentage Minority (M)	Charge Concentration (M-49)
	White	Minority			
A6 Drugs	2,537	8,845	4%	78%	29%
A12 Poss Ctld Sub	11,761	20,827	12%	64%	15%
A6 Gambling	1,313	2,256	1%	63%	14%
B Marijuana	3,562	6,066	4%	63%	14%
A12 Weapons	3,858	4,958	3%	56%	7%
A6 Trespass/Tools	3,725	4,026	3%	52%	3%
A6 Theft	41,807	42,995	31%	51%	2%
A12 Personal	18,934	16,503	13%	47%	-2%
A6 Resisting Arrest	7,997	6,886	6%	46%	-3%
B Trespass	3,446	2,777	2%	45%	-4%
B Personal	2,747	2,166	2%	44%	-5%
A6 Fraud	2,876	1,768	2%	38%	-11%
A6 Order	3,109	1,770	2%	36%	-13%
B Order	5,612	3,125	3%	36%	-13%
A6 Mischief	10,375	4,602	6%	31%	-18%
A12 Order	5,192	984	2%	16%	-33%
B Bad Check	7,064	1,090	3%	13%	-36%
Other	1,900	833	1%	30%	-19%
NY State	137,815	132,477	100%	49%	0%
Charge Seriousness					
B	22,431	15,224	14%	40%	-9%
A6	73,739	73,148	55%	50%	1%
A12	39,745	43,272	31%	52%	3%
Crime Type					
Drugs	17,860	35,738	20%	67%	18%
Gambling	1,313	2,256	1%	63%	14%
Weapons	3,858	4,958	3%	56%	7%
Theft	41,807	42,995	32%	51%	2%
Burglary	7,171	6,803	5%	49%	-0%
Escape & Misc	7,997	6,886	6%	46%	-3%
Personal	21,681	18,669	15%	46%	-3%
Property	10,375	4,602	6%	31%	-18%
Order	13,913	5,879	7%	30%	-19%
Fraud	9,940	2,858	5%	22%	-27%

The last column in Table A2, labeled "Charge Concentration", shows the extent to which minority status was associated with particular arrest charges, charge seriousness levels, and crime types. For arrest charges, it equals the difference between the percentage of minority defendants who were arrested for each arrest charge and the percentage of defendants who were minorities. Forty-nine percent of all defendants were minorities. If minority status were unrelated to arrest charge, then 49 percent of the defendants arrested for each charge would be minorities. Positive charge concentrations indicate crimes that were associated with minority status. Negative differences indicate charges that were associated with white status. The magnitude of the difference indicates the concentration.

The charge concentrations for crime type show that minority status was associated with drug, gambling, and weapons offenses. White status was associated with fraud, order, and criminal mischief crimes.

3. Arrest Charge by Minority Status by County

The percentage of minority defendants were calculated for each arrest charge within each county to learn if minority status was associated with particular arrest charges in all counties. Analysis on the state level showed that minorities were particularly likely to be involved in drugs, gambling and weapons charges. Whites were particularly likely to be involved in fraud, order, and property crimes.

Arrest charge concentrations are classified by county and arrest charge in Table A3. They show that the state patterns did not occur in all counties. In at least 10 of the 11 counties, minorities were more likely to be involved in A6 drug charges. Whites were more likely to be involved in B order, A6 mischief, A12 order, and B bad check charges.

The most striking difference between charge concentrations based upon statewide and county analyses occurred for A12 possession of a controlled substance charges. The statewide analysis shows that minorities were overrepresented by 15 percent. Yet, the county analysis shows that minorities were underrepresented in three of the four counties of New York City.

Charge concentrations based upon the seriousness of the arrest are presented in the lower panels of Table A3. The statewide analysis in Table A2 shows that minorities were more likely than whites to be arrested for A12 charges, the most serious charges. Yet, the county analysis in Table A3 shows that minorities were less likely than whites to be arrested for A12 charges in 9 of the 11 counties.

These comparisons demonstrate that averages based upon data aggregated to the state level can be difficult to interpret. Statewide analyses do not necessarily show how minority status was related to arrest charges in any county.

TABLE A3: Charge Concentrations for Minority Defendants by County and Arrest Charge, 1985-1986

Arrest Charge or Seriousness Level		County											
		NY State	Bronx (M-88)	Kings (M-80)	New York (M-78)	Queens (M-67)	Erie (M-36)	Monroe (M-42)	Nassau (M-37)	Onondaga (M-25)	Suffolk (M-24)	Westchester (M-49)	Other 52 (M-14)
Arrest Charge													
A6	Drugs	29%	6%	-2%	7%	20%	18%	13%	23%	13%	20%	22%	11%
A12	Poss Ctl'd Sub	15%	-1%	-7%	-5%	1%	9%	11%	0%	-11%	-3%	11%	1%
A6	Gambling	14%	-7%	6%	-29%	7%	17%	-20%	14%	-23%	-12%	15%	-6%
B	Marijuana	14%	7%	4%	10%	11%	5%	10%	9%	-15%	-8%	17%	3%
A12	Weapons	7%	-0%	0%	2%	1%	11%	-4%	-9%	1%	-0%	-12%	3%
A6	Trespass/Tools	3%	1%	-0%	7%	1%	2%	-1%	-5%	1%	4%	-0%	1%
A6	Theft	2%	4%	7%	5%	1%	0%	-0%	9%	5%	10%	-1%	1%
A12	Personal	-2%	-4%	-1%	-5%	-6%	-2%	9%	-1%	3%	2%	-1%	5%
A6	Resist Arrest	-3%	-3%	-4%	-6%	-2%	1%	-4%	-8%	1%	2%	-0%	1%
B	Trespass	-4%	-3%	5%	1%	2%	-0%	-3%	2%	-6%	-3%	-3%	-2%
B	Personal	-5%	-4%	-4%	-5%	-2%	7%	14%	-0%	3%	4%	10%	7%
A6	Fraud	-11%	-1%	-4%	4%	-7%	12%	-2%	-7%	-12%	3%	4%	-1%
A6	Order	-13%	-5%	-11%	-13%	-3%	5%	13%	-9%	1%	3%	-17%	-0%
B	Order	-13%	-2%	-1%	-3%	-15%	-7%	-20%	-25%	-16%	-16%	-14%	-9%
A6	Mischief	-18%	-7%	-5%	-13%	-10%	-9%	-6%	-13%	-7%	-7%	-14%	-4%
A12	Order	-33%	-20%	-13%	-13%	-21%	-24%	-26%	-29%	-14%	-14%	-30%	-8%
B	Bad Check	-36%	-11%	-23%	-49%	-5%	-11%	-4%	-34%	-5%	-8%	-17%	-5%
Charge Seriousness													
B		-9%	2%	2%	3%	1%	-2%	-2%	-1%	-7%	-7%	3%	-4%
A6		1%	1%	2%	3%	2%	1%	-1%	3%	2%	5%	-2%	0%
A12		3%	-2%	-4%	-4%	-3%	-0%	3%	-4%	-2%	-1%	2%	2%

4. Prior Criminal Record by Minority Status

The number and cumulative percentage of white and minority defendants is classified by prior record score and minority status in Table A4. The table shows that minorities were more likely than whites to have prior criminal records. Sixty-one percent of the whites but only 48 percent of the minorities had no arrests in the 10 year period preceding the time of the arrest studied here.

The prior record scores were higher for minorities. The average score was 1.28 for whites and 2.26 for minorities. The average prior record score for defendants with prior arrest records was 3.46 for whites and 4.43 for minorities.

TABLE A4: Number and Cumulative Percentage of Defendants by Minority Status and Prior Record Score, 1985-1986

Prior Record Score	Number of Defendants		Cumulative Percentage	
	White	Minority	White	Minority
0 No Record	84,553	63,916	100%	100%
1	15,400	13,629	39%	52%
2	10,912	10,228	27%	41%
3	6,686	6,982	20%	34%
4	4,707	5,770	15%	28%
5	5,173	7,847	11%	24%
6	4,147	6,451	8%	18%
7	2,933	6,322	5%	13%
8	1,644	5,961	2%	9%
9	299	1,868	1%	4%
10 2+ Felony Convictions	1,367	3,498	1%	3%
Total	137,822	132,471		
Average Score	1.28	2.26		
Average Score for Defendants with a Prior Record	3.46	4.43		

Overall, 6 percent of the defendants in New York State had concurrent felony arrests. Nine percent of the minorities but only 4 percent of the whites had concurrent felony arrests. These data are presented later by county in Table A6.

5. Prior Criminal Record by Minority Status by County

The average prior record score and the percentage of defendants with no prior record for white and minority defendants are classified by county in Table A5. The table shows that minorities had more extensive criminal records than whites in all counties.

TABLE A5: Average Prior Record Score and Percentage of Defendants With No Prior Record by Minority Status and County, 1985-1986

County	Average Prior Record Score		Difference (M - W)	Percentage With No Record		Difference (W% - M%)
	White (W)	Minority (M)		White (W%)	Minority (M%)	
New York	1.37	2.57	1.20	67%	47%	20%
Suffolk	1.27	2.35	1.08	61%	43%	18%
Erie	1.19	2.20	1.01	62%	45%	17%
Westchester	1.12	2.08	.96	65%	47%	18%
Nassau	1.11	2.05	.94	65%	51%	13%
Onondaga	1.30	2.23	.93	62%	48%	14%
Other 52	1.28	2.06	.78	60%	49%	11%
Monroe	1.33	2.02	.69	60%	48%	13%
Bronx	1.61	2.23	.62	56%	46%	10%
Queens	1.33	1.93	.60	64%	53%	11%
Kings	1.53	2.04	.51	59%	51%	7%
NY State	1.28	2.26	.98	63%	49%	15%

The average differences in prior records were quite varied in the New York City Area. The average differences between whites and minorities were smallest in three of the four New York City Counties. They were largest in the fourth county of New York City. These extremes demonstrate that important county differences can be masked even by combining the counties of New York City into a single unit for analysis.

The percentage of white and minority defendants with concurrent felony arrests is classified by county in Table A6. The table shows that minorities were more likely than whites to have concurrent felony arrests, that concurrent felony arrests were more likely to occur in the New York City area than in other areas, and that the difference between whites and minorities was especially large in New York County.

TABLE A6: The Percentage of White and Minority Defendants With One or More Concurrent Felony Arrests by County, 1985-1986

County	Percentage with A Concurrent Felony Arrest			Difference (M - W)
	Overall	White (W)	Minority (M)	
Kings	10%	6%	11%	4%
Bronx	9%	5%	9%	4%
Queens	8%	5%	9%	4%
New York	7%	3%	8%	6%
Nassau	6%	4%	8%	4%
Westchester	5%	3%	8%	4%
Suffolk	5%	4%	9%	5%
Onondaga	5%	4%	7%	2%
Monroe	5%	4%	6%	2%
Erie	5%	4%	7%	3%
Other 52	4%	3%	7%	3%
NY State	6%	4%	9%	5%

6. Demographic Variables

The gender and age distributions of whites and minorities were examined for differences. Gender and age can be treated as legitimate or illegitimate variables (see footnote 4). They can be treated as legitimate variables because a number of persons believe that females, the very young and the very old should be treated more leniently than other defendants. The Youthful Offender Provisions in the Criminal Procedure Law mandate that special treatment must be given to certain defendants under age 19.

Gender and age can be viewed as illegitimate variables because the law specifies that all persons over age 19 should be processed in the same manner. Furthermore, many persons believe that gender and age should not be used as a criteria for awarding special treatment. These variables are usually treated as illegitimate variables.

a) *Gender by Minority Status by County*

The number and percentage of white and minority female defendants are classified by county in Table A7. The bottom row shows that 20 percent of all defendants in the state were female. The percentage of female defendants ranged from a high of 28 in Onondaga and Monroe Counties to a low of 15 in Bronx and New York Counties. Relatively few females were arrested in New York City.

TABLE A7: Number and Percentage of Female Defendants by Minority Status, and County, 1985-1986

County	Number of Female Defendants		Percentage of Female Defendants Overall	Percentage of Female Defendants		Difference (M - W)
	White	Minority		White (W)	Minority (M)	
Onondaga	1,113	487	28%	26%	35%	9%
Monroe	1,903	1,552	28%	26%	30%	4%
Other 52	15,564	2,890	24%	24%	27%	4%
Westchester	1,332	1,364	24%	23%	25%	2%
Erie	2,221	1,539	23%	21%	26%	5%
Nassau	1,396	1,182	21%	18%	26%	8%
Queens	817	1,779	17%	16%	17%	1%
Suffolk	1,454	576	16%	15%	19%	4%
Kings	712	3,681	16%	13%	16%	4%
Bronx	294	2,383	15%	14%	15%	1%
New York	2,356	6,500	15%	17%	14%	-4%
NY State	29,162	23,933	20%	21%	18%	-3%

The percentage of white female defendants was subtracted from the percentage of minority female defendants to focus upon differences in the gender of white and minority defendants. Positive differences show that minorities had a greater percentage of female defendants, and negative differences show that whites had a greater percentage of female defendants. These differences are presented in the last columns of Table A7. They show that minorities had a greater percentage of female defendants in all but New York County. In New York County, whites had a greater percentage of female defendants.

Differences in the percentage of white and minority female defendants were relatively small in most counties. The differences were largest in Nassau and Onondaga Counties. In these counties, the percentage of minority females was almost ten percent higher than the percentage of white females.

Differences in the gender of minority and white defendants are totally suppressed on the statewide level of analysis. The NY State row in Table A7 shows that whites had a greater percentage of females than minorities. This pattern did not occur in 10 out of the 11 county units.

b) Gender by Minority Status by Arrest Charge

The percentage of white and minority female defendants is classified by arrest charge and charge seriousness Table A8. The first two columns show that relative to males, females were very likely to be arrested for B bad check, A6 theft, and A12 order charges.

Differences in the percentage of minority and white female defendants are summarized in the 3rd and 4th columns. Positive percentages in the 3rd column identify crimes wherein the percentage of minority women exceeded the percentage of white women. The differences are described in the 4th column. They show that minorities had a higher percentage of females arrested for A6 gambling, B bad check, B personal, A12 personal, A6 mischief, A12 weapon, and A12 order charges. Whites had a higher percentage of females arrested for A6 theft, B marihuana, A6 trespass/tools, A6 fraud, A6 drugs and B trespass charges.

TABLE A8: Percentage of Female Defendants by Minority Status, Arrest Charge, and Charge Seriousness Level, 1985-1986

Arrest Charge or Seriousness Level	Minority Status		Difference (M - W)	Higher Percentage of Female Defendants
	White (W)	Minority (M)		
Arrest Charge				
A6 Gambling	18%	29%	12%	Minorities
B Bad Check	48%	55%	7%	Minorities
B Personal	6%	12%	6%	Minorities
A12 Personal	10%	15%	5%	Minorities
A6 Mischief	9%	14%	5%	Minorities
A12 Poss Weapon	6%	10%	5%	Minorities
A12 Order	29%	33%	4%	Minorities
A6 Resist Arrest	15%	17%	2%	
B Order	16%	18%	1%	
A6 Order	23%	23%	0%	
A12 Poss Ctld Subst	14%	12%	-2%	
B Trespass	13%	9%	-4%	Whites
A6 Drugs	15%	10%	-5%	Whites
A6 Fraud	18%	14%	-5%	Whites
A6 Trespass/Tools	13%	8%	-5%	Whites
B Marijuana	12%	6%	-6%	Whites
A6 Theft	33%	27%	-6%	Whites
NY State	21%	18%	-3%	
Seriousness Level				
B	18%	9%	-10%	Whites
A6	63%	67%	4%	Minorities
A12	19%	25%	6%	Minorities

c) Age by Minority Status by County

The percentage and concentration of minority defendants is classified by age and county in Table A9. The table shows that the distribution of minority status was very similar for all ages. The largest differences occurred for persons over 50. Here, the percentage of whites exceeded the percentage of minorities.

TABLE A9: Percentage and Concentration of Minority Defendants by Age and County, 1985-1986

Age Group							
County	Overall	16-18	19-24	25-29	30-40	41-50	51+
	Percentage Minority (P)	Percentage Minority (M)					
Bronx	88%	89%	90%	89%	87%	85%	72%
Kings	80%	83%	82%	80%	78%	79%	67%
New York	78%	87%	80%	77%	75%	75%	63%
Westchester	50%	50%	50%	50%	50%	50%	47%
Monroe	49%	49%	49%	50%	50%	48%	42%
Erie	48%	45%	47%	49%	50%	47%	43%
Nassau	48%	48%	49%	49%	49%	46%	38%
Queens	47%	45%	46%	46%	47%	49%	50%
Suffolk	43%	39%	42%	45%	44%	45%	40%
Onondaga	43%	41%	43%	46%	45%	42%	35%
Other 52	34%	32%	33%	37%	38%	35%	28%
NY State	49%	43%	48%	54%	54%	48%	32%
Percentage of All Defendants		17%	31%	19%	23%	7%	4%
		Concentration (M-P)					
Bronx		1%	2%	1%	-1%	-3%	-16%
Kings		3%	2%	0%	-2%	-1%	-13%
New York		9%	2%	-1%	-3%	-3%	-15%
Westchester		0%	0%	0%	0%	0%	-3%
Monroe		0%	0%	1%	1%	-1%	-7%
Erie		-3%	-1%	1%	2%	-1%	-5%
Nassau		0%	1%	1%	1%	-2%	-10%
Queens		-2%	-1%	-1%	0%	2%	3%
Suffolk		-4%	-1%	2%	1%	2%	-3%
Onondaga		-2%	0%	3%	2%	-1%	-8%
Other 52		-2%	-1%	3%	4%	1%	-6%
NY State		-6%	-1%	5%	5%	-1%	-17%

Appendix B: Modeling Minority Percentages

The logit parameter can be converted into a multiplier to estimate the percentage of minorities that would receive the dispositions if whites and minorities were arrested for the same charges, had the same prior criminal records, and were processed in the same county. The conversion involves four steps.

First, calculate the observed odds for whites. Odds equal the probability the disposition occurred divided by the probability the disposition did not occur. Table 6 shows that 70.4 percent of the whites without prior arrest records in Bronx County were processed as culpable defendants. The observed odds for these whites equals $.704 / .296$ or 2.378.

Second, convert the logit parameter into an odds-ratio. This odds-ratio equals the odds of the disposition for minorities divided by the odds of the disposition for whites when differences in arrest charges, prior records, and county variables are taken into account. It is calculated by taking the exponent of the logit parameter listed in Table 6. The odds-ratio between minority status and being processed as a culpable defendant equals $\exp(.2648)$ or 1.303 for defendants without prior arrest records in Bronx County.

Third, multiply the observed odds for whites by the odds-ratio to estimate the odds for minorities. The multiplication of 1.303 times 2.378 equals 3.10.

Fourth, calculate the probability of the disposition for minorities by dividing the odds in step 3 by one plus the odds. In the present example, the probability of being processed as a culpable defendant would equal $(3.10 / 4.10)$ or .76. It shows that if a group of whites and minorities were arrested for the same charge, if they had no prior arrest record, and if they were processed in Bronx County, and if 70 percent of the whites were processed as culpable defendants, then 76 percent of the minorities would be processed as culpable defendants.

Appendix C: Regression Model of Sentence Length

The regression equations were based upon indicator variables, continuous variables, and indicator by continuous variables. The indicator variables included county, minority status, prior arrests (yes or no), arrest charge, violation or infraction conviction, and charge reduction. The charge reduction variable was used in regression models that analyzed jail sentences based upon A6 and A12 seriousness level charges. It identified defendants whose conviction charge was less serious than their arrest charge but more serious than a violation or infraction charge.

The continuous variables included prior criminal history score and the logarithm of the number of concurrent felony arrests. One was added to the number of concurrent felony arrests before the logarithm transformation was applied.

The interaction variables included county by prior arrests, county by arrest charge, and county by minority status by prior arrests.

The analysis was limited to combinations of arrest charges and counties that contained at least 50 defendants. These combinations represented 89 percent of all persons who were sentenced to jail (14,907 out of 16,8231).

The logarithm of the jail sentence was used for the dependent variable. This transformation stabilized the variability in variance that is associated with sentence length data.