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DISCRIMINATION AND THE
DECISION TO INCARCERATE

May 12, 1983

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ACKNOWLEDGEMENTS

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The number of minority individuals processed and penalized by the criminal
justice system is grossly disproportional to their numbers in the overall
population. For example, although blacks constituted only about 12 percent of the
U.S. population, they accounted for almost 35 percent of those who were arrested in
1979, and that same year the rate of incarceration per 100,000 population was
approximately seven times greater for Blacks than for Whites. Determining whether
the differential is due to discriminatory decision making within the system is a
complex research problem, however.

The primary source of racial disproportionality in the justice system is the
differential created at arrest. Blacks are disproportionately arrested for the
crimes that typically result in prison sentences (homicide, robbery, assault,
burglary), and this arrest differential accounts for approximately 80 percent of
the disproportionality in prison populations. The remaining 20 percent not
explained by differences in arrest charges could be due to racial discrimination in
post-arrest processing, regional differences in processing norms, and arguably
legitimate factors such as prior criminal record. Before making judgments about
the impact of minority status on criminal justice decision making, intervening
processing decisions must be examined and the effects of legitimate factors must be
understood.

The present study examined the decision to incarcerate (the "IN/OUT" decision)
in 11,098 cases involving probation eligible offenders convicted of felony offenses
in New York State during 1980. Cases in which imprisonment was mandatory were
excluded from the analyses. Analyses were conducted separately for each of three
regions of New York State: New York City, the "Suburban" area surrounding New York
City, and "Upstate."

The influence of race on the decision to incarcerate was determined by
employing statistical procedures that define defendants who were similarly situated
on important and potentially confounding factors. These factors included prior
record, age, sex, crime type, statutory class and charge degradation. The major
findings of the study were:

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-- Statewide, almost 53 percent of all probation eligible defendants were incarcerated, but only about 49 percent of the White and Other defendants received jail or prison sentences. About 52 percent of the Hispanic defendants and 58 percent of the Black defendants were incarcerated. The percentage of each group sentenced to state prison was lower, but the pattern was similar.

-- Judges incarcerated the highest proportion of defendants in the Suburban region (62 percent) and the lowest proportion Upstate (47 percent); New York City judges incarcerate about 53 percent of probation eligible defendants. The proportion of defendants sentenced to state prison was 24 percent in New York City and about 15 percent in both the Suburban and Upstate areas.

-- The differences in incarceration rates among racial/ethnic groups were small in New York City, but the disproportionality was substantial in other areas of the State. New York City judges incarcerated about half of the White and Hispanic defendants and 55 percent of the Blacks. Blacks were 13 percentage points more likely than Whites to be incarcerated in the Suburban area (71 percent to 58 percent) and 17 percentage points more likely to be incarcerated Upstate (61 percent to 44 percent).

-- The independent effect of race (when simultaneously controlling for prior record, age, sex, crime type, statutory class, and charge degradation) was less than the overall disproportionality described above. However, in both the Suburban and Upstate regions being Black still increased the chances of being incarcerated to a large and statistically significant degree. The independent effect of race was greatest in the Suburban region, and race had no large or stable effect in the New York City analysis.

-- The magnitude of the independent race effect was greatest in the middle range (around the .5 probability) where the outcome of a case was otherwise a "toss up" in terms of the other factors considered in this analysis. For such cases, Blacks were about 11 percent more likely than Whites to be incarcerated in the Suburban region and about 8 percent more likely to be incarcerated Upstate.

The disproportionality in the decision to incarcerate that was observed in the Suburban and Upstate regions was not fully explained by the quantitative models developed. Other potentially important factors such as weapons use, injury to victims, and pretrial detention were not available for study. If influential factors not included in the study happen to be correlated with minority status, then some of the disproportionality that is due to the omitted factors will have been attributed to minority status. However, the findings of this study do demonstrate that discriminatory _impact_ in the Suburban and Upstate regions cannot be fully explained on the basis of prior record, age, sex, crime type, statutory class, and charge degradation. Understood in the context of previous research, this evidence can be interpreted as establishing a _prima facie_ case that race plays an important role in sentencing defendants from the Suburban and Upstate regions of New York State.

INTRODUCTION

The impact of race and ethnicity on criminal justice processing is a matter of great ethical concern because it goes to the core of our ability as a society to dispense justice in a fair and evenhanded manner. A basic principle of justice in the United States is the equality of individuals in the eyes of the law, and a finding that the criminal justice system discriminates against any group would be a serious indictment of society's ability to function according to the principles we espouse. This concern, and the growing political influence of minorities, has forced criminal justice practitioners and researchers to begin addressing the issue of discrimination. The specific question at issue is whether criminal justice decision makers (police, prosecutors, judges, etc.) systematically discriminate against minorities and thereby produce more intrusive or negative consequences than are imposed on similarly situated non-minorities. The question usually focuses on the differential treatment of Blacks, but in some areas of the United States Hispanics and American Indians are believed to be the objects of discrimination.

It is easy to understand how perceptions of discrimination by the criminal justice system arise. The United States has a long history of discrimination against minorities. Discrimination historically has pervaded virtually every important aspect of society from economic opportunities to interpersonal relations, and the justice system is no exception.[1] Attempts to eliminate discrimination over the past 30 years have been at least partially successful in areas such as employment and education.[2] There has also been progress toward eliminating discrimination from the criminal justice system, but the amount of progress is a subject of considerable debate.[3] The debate is fueled both by dramatic incidents of discriminatory behavior and by data concerning the system's routine processing of minority defendants. This report addresses the latter issue by examining the sentences imposed on probation eligible offenders convicted of felonies in New York State.

DISPROPORTIONALITY AS EVIDENCE OF DISCRIMINATION

If one examines the number of minority and non-minority persons processed by the criminal justice system, it is immediately apparent that the number of minorities in the system is disproportional to their numbers in the overall population. For example, although Blacks constituted only about 12 percent of the U.S. population, they accounted for almost 35 percent of those who were arrested in 1979.[4] The rate at which Blacks are incarcerated in state and federal prisons is even more dramatic: the rate of incarceration per 100,000 population is approximately 7 times greater for Blacks than for Whites.[5] This disproportionality has been interpreted by some as evidence of racial discrimination.[6] Such direct interpretations of these data are not appropriate, however.

As Blumstein has pointed out, the fact that a group is disproportionately represented at some point in the criminal justice system cannot directly be interpreted as evidence of discrimination.[7] In the context of routine criminal justice processing, the term discrimination connotes an ethical judgment about disproportionality: discrimination is disproportionality that is not considered justifiable. There are, in fact, many types of individuals who are disproportion- ally processed by the system. The normative label of discrimination is not usually applied because there are acceptable reasons for the differences. For example, males constituted about 96 percent of the national prison population in 1979, although females comprised over half of the total U.S. population.[8] The overwhelming preponderance of males in prisons is not usually viewed as ethically unacceptable because males commit more crime and generally more serious crimes than do females.[9] Thus, there are rational and acceptable reasons for their disproportional presence in prison populations. Similarly, persons between 16 and 18 years of age constituted about 17% of all arrests in 1979, but only about 6% of the U.S. population.[10] The reason 16 to 18 year olds were arrested at such a high rate is that they committed functionally arrestable criminal acts at a higher rate than persons in other age groups,[11] and it would be inappropriate to infer from these data that they were being discriminated against by criminal justice decisionmakers. The question is whether it is appropriate to attribute the differential presence of minorities to discriminatory decision making within the system.

Blumstein examined this issue by comparing the national distributions of arrest rates and incarceration rates for Blacks and Whites.[12] He identified the offenses for which individuals were imprisoned and compared the proportions of White and Black prisoners with their proportions in the same offenses at arrest. If post-arrest decisions were highly discriminatory, one would expect large differences between the proportion of Black and White offenders arrested for a given offense and the proportion imprisoned for that offense. If processing decisions were not discriminatory, the proportions should be nearly identical for each offense type. Blumstein found that 80 percent of the disproportionality in prison populations could be accounted for by differential arrest rates. That is, Blacks were disproportionately arrested for the crimes that typically resulted in prison sentences (homicide, robbery, assault, burglary), and this arrest differential largely accounted for the racial composition of prison populations. He also found that this relationship was stable from 1970 to 1979.

Blumstein's study demonstrated that the primary component of racial disproportionality in the justice system is the differential created at arrest. Initial racial differences are perpetuated at other decision points, thus creating a system whose clients are predominately minorities. Blumstein suggested a number of other factors that might account for the disproportionality not explained by the differences in arrest charges (the 20 percent). Racial discrimination in post- arrest processing was one of the possibilities he suggested. For example, racial factors might have influenced prosecutors in deciding whom to prosecute and how vigorously to pursue prosecutions. Similarly, racial factors might have influenced sentencing decisions. Although racial discrimination may have been responsible for some of the observed differences, it is not likely to have been the only factor involved; as Blumstein pointed out, arguably legitimate factors such as prior criminal record are also likely to account for a portion of the unexplained 20 percent.

Finally, Blumstein's analysis examined only the initial inputs to the system (arrests) and a single outcome of system processing (prison populations). This type of analysis could not address the possibility that discrimination at one decision point was compensated for in other decisions. Conley and Zimmerman, for

example, found that the voting patterns of some Oklahoma Parole Board members systematically favored the release of Black inmates.[13] They suggested that this may have been an attempt to redress perceived racial inequities in Oklahoma judges' sentencing decisions. There is clearly a need to examine intervening processing decisions and to account for the effects of other legitimate factors before making judgments about the impact of minority status on criminal justice decision making.

DISCRIMINATION IN SENTENCING

One processing decision of considerable importance is sentencing. Sentencing decisions influenced by a defendant's race or ethnicity are ethically and legally inappropriate. A body of empirical research has addressed the question of discrimination in sentencing decisions, but findings of the research are ambiguous and sometimes contradictory. Some studies have found that minority status (primarily race) had an effect on sentencing, but many of these studies have been criticized for methodological deficiencies such as the failure to adequately control the effects of other legitimate factors.[14] Studies that attempted to control for these factors typically failed to identify minority status as an important element in sentencing decisions.[15]

Even methodologically sophisticated studies have often been conducted in ways that limit the generalizability of their findings. For example, in their multivariate analysis of sentencing decisions in Chicago, Newark, and Phoenix, Zimmerman and Tracy found no significant race effect.[16] This study examined three large metropolitan areas with homogeneous court systems and, presumably, with established processing norms in the felony courts. These more urban courts routinely deal with a larger number of minority defendants than other courts in their respective states. Their routine involvement with minority defendants may have led to the evolution of processing norms quite different from those in non-urban courts where minority defendants are less frequently encountered. Also, community attitudes toward minorities in metropolitan areas may differ from those in the suburbs, small towns, or rural areas. Generalizing the Zimmerman and Tracy findings to Illinois, New Jersey, and Arizona would almost certainly lead to inaccurate impressions about sentencing outside of Chicago, Newark, and Phoenix.

The current inability to definitively answer questions about sentencing discrimination does not imply that empirical studies are without value. There has been progress toward addressing the issue more rigorously, and each thoughtful study helps in understanding how better to ask and answer the central questions. There have been studies in several specific jurisdictions that were sufficiently rigorous to support valid conclusions about discrimination (or the lack of discrimination). The remainder of this report presents the results of a recent analysis that contributes to this growing body of knowledge. This study used relatively refined methods to examine sentencing decisions in New York State.

THE DECISION TO INCARCERATE IN NEW YORK STATE

Data for the New York State study were obtained from the New York State Computerized Criminal History/Offender-Based Transaction Statistics (CCH/OBTS) data bases. From the CCH/OBTS files, a group of cases was selected involving probation-eligible offenders who were convicted of felony offenses in 1980. The resulting 11,098 cases[17] constituted the study cohort that supported this empirical analysis of sentencing decisions by New York State judges.[18]

The focus of the analysis was the decision about whether or not a convicted defendant should be incarcerated (the "IN/OUT" decision). Judicial decisions about the length of confinement were excluded from this analysis. For felons convicted in New York State, the IN/OUT decision actually involves three basic alternatives or combinations thereof: State prison, county jails, and non-incarcerative sanctions (probation, fines, etc.). County jail sentences of one year or less are possible for probation eligible felons, and the State provides reimbursement to counties for housing convicted felons. Defendants sentenced to county jail received a sentence involving incarceration, so they, along with those sentenced to State prison, were classified as "IN" decisions for this analysis. It should also be emphasized that the 11,098 cases involved only defendants who were eligible to receive a probation sentence: defendants for whom prison was mandatory, based on either conviction offense or prior felony convictions, were excluded. These cases were excluded because when mandatory prison sentences were involved, the judges did

not make an IN/OUT decision; they only decided on the sentence length.[19]
Defendants for whom incarceration was not mandatory are referred to as "probation
eligible" defendants in this report.

Regional Differences

The racial/ethnic composition of the total cohort of 11,098 probation eligible
defendants is displayed in Table 1. Almost 53 percent of the defendants belonged
to a minority group for which discriminatory sentencing has been raised as an
issue. About 40 percent of the defendants in the cohort were Black, and about 13
percent were Hispanic. Thus, minority defendants slightly outnumbered White
defendants.[20] As had been expected from the literature, minority defendants were
sentenced to incarceration at higher rates than Whites. Statewide, almost 53
percent of all probation eligible defendants were incarcerated, but only about 49
percent of the White and Other defendants received jail or prison sentences. About
52 percent of the Hispanic defendants and 58 percent of the Black defendants were
incarcerated. The percentage of each group sentenced to state prison was lower but
the pattern was similar. These data raise the possibility of discrimination in the
sentencing of minority defendants.

As discussed earlier, there are other factors that need to be examined before
attributing the differences between the White and minority defendants to
discrimination. One factor is regional differences in sentencing patterns. For
example, there could have been equitable but more severe treatment of all
defendants in regions with large numbers of minority defendants. There could also
have been discriminatory sentencing in one area of the State and non-discriminatory
sentencing patterns in other areas. It was previously suggested that there may be
less discrimination against minority defendants in highly urban areas, such as New
York City, than in less urban areas of a jurisdiction.

TABLE 1

Distribution of Sentences by Race/Ethnicity

Race/Ethnicity	Number		% Incarcerated	% Prison
Black	4,416	(39.8%)	58.0%	24.2%
Hispanic	1,409	(12.7%)	52.2%	19.9%
White & Other	5,273	(47.5%)	48.7%	16.2%
TOTAL New York State	11,098	(100%)	52.9%	19.9%

To explore this possibility, New York State was divided into three areas and
the proportion of incarcerative sentences was calculated for each. Table 2 shows
the results of this analysis. Judges incarcerated the highest proportion of
defendants in the New York City suburbs (62 percent) and the lowest proportion
Upstate (47 percent). This analysis also indicated that the majority of probation
eligible cases during 1980 came from New York City. The proportion of defendants
sentenced to state prison was 24 percent in New York City and about 15 percent in
both the Suburban and Upstate areas. These data indicate that there were
differences in sentencing outcomes among the three regions, and it is thus
important to examine the distribution of sentences for each racial/ethnic group
within each region.

Table 3 shows the result of this cross-classification. Three-quarters of the New York City defendants were minorities; 53 percent were Black and 22 percent were Hispanic. The New York City judges incarcerated about half of the White and Hispanic defendants, and 55 percent of the Blacks. Although the differences in incarceration rates among racial/ethnic groups were small in New York City, the disproportionality was substantial in the other areas of the State. In both the

TABLE 2

Distribution of Sentences by Region

Region	Number		% Incarcerated	% Prison
New York City	6,078	(54.8%)	53.2%	24.0%
Suburban	1,735	(15.6%)	62.5%	14.3%
Upstate	3,285	(29.6%)	47.2%	15.1%
TOTAL New York State	11,098	(100%)	52.9%	19.9%

TABLE 3

Distribution of Sentences by Race/Ethnicity within Region

Region	Race/Ethnicity	Number		% Incarcerated
New York City	Black	3,231	(53.2%)	55.2%
	Hispanic	1,357	(22.3%)	50.9%
	White & Other	1,490	(24.5%)	50.2%
Suburban	Black	580	(33.4%)	70.7%
	Hispanic	37	(2.1%)	62.2%
	White & Other	1,118	(64.4%)	58.3%
Upstate	Black	605	(18.4%)	60.8%
	Hispanic	15	(0.4%)	60.0%
	White & Other	2,665	(81.1%)	43.9%

Suburban and Upstate areas there were very few Hispanic defendants. White defendants predominated in both areas and Whites were much less likely to be incarcerated than Blacks. Blacks were 13 percentage points more likely than Whites to be incarcerated in the Suburban area (71 percent to 58 percent) and 17 percentage points more likely to be incarcerated Upstate (61 percent to 44 percent). Thus, the complexion of disproportionality between minorities and Whites was different in the three areas of New York State, and the statewide distribution (Table 1) masked these differences.

Other Factors Related to Incarceration Rates

One legitimate factor consistently found to influence the decision to incarcerate is the defendant's prior criminal record. In fact, prior criminal

activity has usually been found to be the most important influence on IN/OUT decisions.[21] In New York State, defendants with prior <u>felony</u> convictions who are subsequently convicted of another felony generally are not eligible for probation and, therefore, would not have been included in these analyses. However, other features of a defendant's criminal history may still have influenced the IN/OUT decision for these probation eligible defendants. Therefore, a composite scale was created to indicate the intensity of prior involvement with the criminal justice system. The scale ranged from 0 to 3, with 0 indicating a negligible prior criminal history and 3 indicating substantial prior involvement with the justice system. Defendants in this study were given one point for each of the following elements contained in their prior criminal record: one or more prior felony arrests; one or more prior misdemeanor convictions; three or more prior misdemeanor arrests. For example, a defendant with no prior felony arrests, no prior misdemeanor convictions, and two prior misdemeanor arrests was given a score of zero.

As seen in Table 4, the majority of probation eligible defendants had negligible prior criminal history or only one point on the prior record scale; about 60 percent of the defendants in each region had little or no prior contact with the criminal justice system. The categories of the scale show dramatically increasing percentages of defendants incarcerated as prior criminal involvement becomes more serious. The influence of prior record is the greatest in New York City, where there was a 56 percentage point difference between defendants with the least serious prior records (28 percent were incarcerated) and defendants with the most serious prior records (84 percent were incarcerated). Outside New York City the range was attenuated somewhat, but in both the Upstate and Suburban areas the differences in the incarceration rates of defendants at the extremes of this scale still exceeded 40 percentage points. Prior record was clearly an important factor in these decisions and it must be considered when analyzing the influence of minority status in sentencing.

Another legitimate factor that has been shown to be an influence on sentencing decisions is the crime for which the defendant was convicted.[22] This factor is often important because it helps explain why defendants with similar prior records can face different risks of being incarcerated. For example, about 32 percent of the New York State defendants who had a negligible prior criminal record were still incarcerated. One reason that these individuals were incarcerated may have been that they committed serious crimes. Conversely, about 18 percent of the defendants

with the most serious prior records were not incarcerated, perhaps because they were convicted of relatively minor offenses. One way to examine this issue is to classify the most serious conviction offense in each case according to the type of crime involved. Table 5 shows the distributions of defendants incarcerated when the conviction offenses are categorized into Personal, Property, Drug, and Public Order crimes.

TABLE 4

Distribution of Sentences by Prior Criminal Involvement within Region

Region	Prior Scale	Number		% Incarcerated
New York City	0	2,188	(36.0%)	28.1%
	1	1,390	(22.9%)	53.7%
	2	1,663	(27.4%)	70.2%
	3	837	(13.8%)	84.2%
Suburban	0	648	(37.3%)	42.3%
	1	405	(23.3%)	69.1%
	2	405	(23.3%)	74.3%
	3	277	(16.0%)	83.0%
Upstate	0	1,506	(47.5%)	32.5%
	1	809	(24.6%)	54.5%
	2	563	(17.1%)	60.2%
	3	353	(10.7%)	74.2%
TOTAL New York State	0	4,396	(39.6%)	31.7%
	1	2,604	(23.5%)	56.3%
	2	2,631	(23.7%)	68.7%
	3	1,467	(13.2%)	81.6%

Most of the convictions in New York City involved a Personal crime as the most serious charge (55 percent). Property offenses were the dominant crime type in the rest of the State, constituting about 60 percent of the conviction offenses. There were differences in the percentage of defendants incarcerated for each offense type, but the differences were much smaller than those related to prior record. In the Suburban and Upstate regions, defendants convicted of Public Order crimes had the lowest likelihood of incarceration, and those convicted of Personal crimes had the highest. In both of these regions there was about a 25 percentage point difference between the rate of incarceration for Public Order and Personal Crimes.

The situation in New York City was more complex. About 47 percent of the defendants convicted of Drug and Public Order crimes were incarcerated. The highest rate of incarceration was for Property crimes (59 percent), and 51 percent of the defendants convicted of Personal crimes were incarcerated. This pattern seems counterintuitive, but may again reflect a joint effect with prior record. For example, there may have been a large number of New York City defendants who committed Property crimes and who also had a serious prior criminal record. It is also possible that interactions between prior record and crime type were operating in other ways that account for the seeming irrationality of the crime type distribution. It is possible, for example, that defendants with extensive prior records and who were convicted of Personal crimes had an even higher likelihood of incarceration than would be suggested from the independent presence of each condition.

The data presented so far make it clear that it is important to examine simultaneously the prior records and conviction offenses of defendants within each region before it is possible to determine whether minority status had a differential impact on sentencing. There are a number of other normatively and legally acceptable factors that can affect sentencing decisions. To the extent that any such factors are wholly or partially confounded with minority status, it could appear that decisions are made on the basis of race or ethnicity. For example, if in a particular jurisdiction Personal crimes are more apt to result in incarcerative sentences than Property crimes, and if in that same jurisdiction the crimes categorized as "person offenses" are more apt to have been committed by

TABLE 5

Distribution of Sentences by Conviction Crime Type within Region

Region	Crime Type	Number		% Incarcerated
New York City	Personal	3,344	(55.0%)	51.4%
	Property	1,981	(32.6%)	58.6%
	Drug	573	(9.4%)	47.1%
	Public Order	180	(3.0%)	46.7%
Suburban	Personal	388	(22.4%)	68.3%
	Property	1,044	(60.2%)	65.5%
	Drug	111	(6.4%)	50.5%
	Public Order	192	(11.1%)	41.7%
Upstate	Personal	587	(17.9%)	59.8%
	Property	1,946	(59.2%)	47.6%
	Drug	123	(3.7%)	44.7%
	Public Order	629	(19.1%)	34.3%
TOTAL New York State	Personal	4,319	(38.9%)	54.1%
	Property	4,971	(44.8%)	55.7%
	Drug	807	(7.3%)	47.2%
	Public Order	1,000	(9.0%)	38.0%

minority offenders, then the focus on crime type will tend to result in a disproportionate number of minority defendants being incarcerated. In that case, however, the disproportionality would not necessarily be viewed as discriminatory. To the extent that observed disproportionality can be explained (empirically) on the basis of normatively and legally acceptable factors, the case for discrimination is weakened, at least in the absence of more direct evidence of discriminatory intent. The remainder of this chapter examines the magnitude of the influence of minority status on the IN/OUT decision, after controlling the joint influence of a number of legitimate factors.

Simultaneous Control for Legitimate Factors

Controlling the joint influence of additional factors could be accomplished by extending the crosstabulations already presented, but tabular analyses involving more than two or three dimensions are difficult to present and confusing to interpret. The preferred method for assessing the joint influence of a large number of variables is to apply simultaneous mathematical controls using multivariate statistical techniques. One such technique that is appropriate for examining the effect of race/ethnicity on the IN/OUT decision is binary logit analysis.[23]

Binary logit analysis is a technique for assessing the relationship between a set of "independent" explanatory or predictor variables and a dichotomous "dependent" variable. In the present study, the independent variables are race/ethnicity and the more legitimate control factors such as crime type and prior record. The dependent variable is the dichotomous IN/OUT decision. The result of a binary logit analysis is a mathematical equation, or "model", that specifies the optimum weight given each independent variable in the effort to explain or predict outcomes. In this case, the model equation specifies the relative influence of race/ethnicity and each legitimate control factor on the probability of incarceration.[24]

A list of the variables included in the logit analysis is presented in Table 6. Logit equations were constructed for each region, so the distributions of the

variables are also reported separately for each. The regions were analyzed separately because it was believed that there were likely to be such different sentencing patterns in each region that a statewide analysis would mask important differences. Specifically, sentencing patterns in New York City might have resulted in underestimating the influence of race statewide because of the large number of cases in New York City and the apparent lack of sentencing disproportionality there (cf. Table 3).

The prior record scale was treated as a single interval variable (labeled BADGUY). Three of the crime types were treated as separate dichotomous variables. They were coded: personal crime or not (PERS), property crime or not (PROP), and drug crime or not (DRUG). Public order offenses were designated indirectly as not PERS, PROP, or DRUG, and the effects of the public order offenses were therefore absorbed in the equations' "constant" terms.

The statutory class of the conviction offense was included as another index of crime seriousness. In general, the most serious crimes are included in statutory class A, and the most severe penalties are permitted for these crimes. Subsequent statutory groupings involve increasingly less serious crimes and less severe penalties as sentencing options. Class E offenses are the least serious felonies in New York State. Because there were so few class A, B, and C felonies in this probation eligible cohort, these statutory classifications were grouped as one category for purposes of this analysis (CLASABC). These serious crimes constituted less than 10 percent of the conviction offenses in all of the regions. Class D offenses were treated as a distinct group (CLASD), and constituted the most frequently occuring conviction class in each region. Class E felonies were identified indirectly as not CLASABC or CLASD, and their contribution to the probability of incarceration was absorbed in the constant terms along with that of the Public Order offenses.

Charge reductions were captured in the variable DOWN. This variable indicated the number of statuatory classes that charges were reduced from arrest to

TABLE 6
Variables used in the Logit Analysis

Variable Name	Variable Description	New York City (N=6078)	Suburban (N=1735)	Upstate (N=3285)
BADGUY[a]	Prior Record Scale	$\bar{X}= 1.1890$	$\bar{X}= 1.1793$	$\bar{X}=.9114$
PERS[b]	Convicted of Personal Crime	55.0%	22.4%	17.9%
PROP[b]	Convicted of Property Crime	32.6%	60.2%	59.2%
DRUG[b]	Convicted of Drug Crime	9.4%	6.4%	3.7%
CLASABC[b]	Convicted of Class A, B, or C Felony	9.1%	5.4%	3.4%
CLASD[b]	Convicted of Class D Felony	52.5%	39.5%	46.1%
DOWN[c]	Number of Classes Charge Reduced	$\bar{X}= 1.0535$	$\bar{X}=.7372$	$\bar{X}=.5306$
AGERISK[b]	Defendant's Age Between 20 & 30	41.1%	31.2%	36.3%
DEFSEX[b]	Male Defendants	93.6%	92.6%	93.3%
BADXPERS[d]	BADGUY X PERS Interaction	--	--	--
BADXPROP[d]	BADGUY X PROP Interaction	--	--	--
BADXDRUG[d]	BADGUY X DRUG Interaction	--	--	--
PERSXABC[d]	PERS X CLASABC Interaction	--	--	--
RACE[b]	Black	53.2%	35.5%	18.8%
	Hispanic	22.3%		
IN/OUT	Defendants Incarcerated (dependent variable)	53.2%	62.5%	47.2%

[a] = coded 0,1,2, or 3

[b] = coded +1 = yes; -1 = no

[c] = coded 0,1, or 2

[d] = calculated as the products of the component
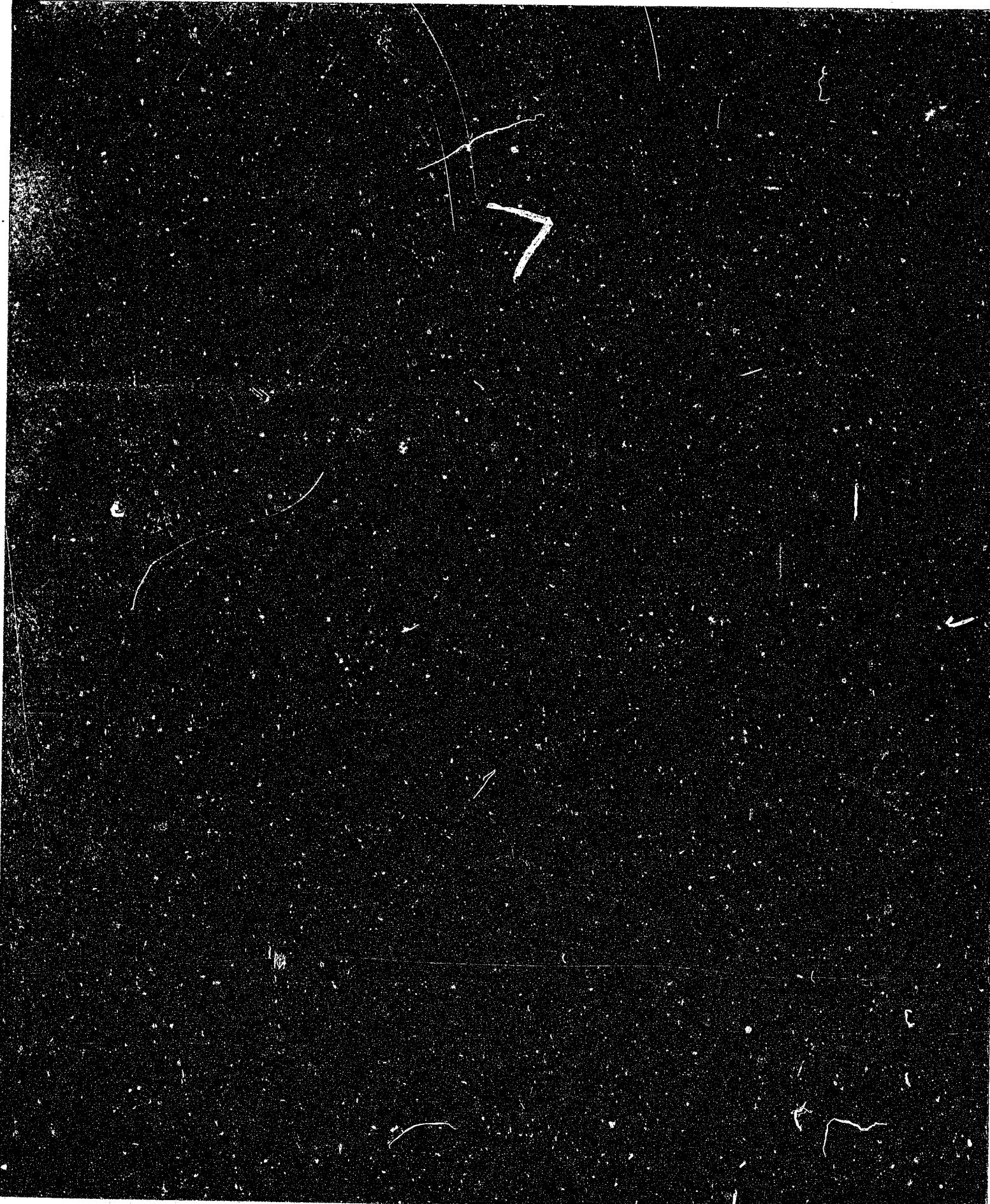
conviction, and it was treated as an interval variable in this analysis. DOWN
provided a rough indication of the seriousness of the arrest charge (which was
likely to be more consistent with the actual offense than the conviction charge),
and the type of deal achieved through charge negotiation.

Defendants between the ages of 20 and 30 have the highest rates of
incarceration of any group.[25] The variable AGERISK was included in the analysis to
determine whether minority defendants have differential incarceration rates when
age is (statistically) held constant. Thirty to forty percent of the defendants in
the three regions were in this age group. Finally, male defendants were identified
by the variable DEFSEX. Males constituted over 90 percent of the probation
eligible defendants in the cohort and generally have higher incarceration rates
than females. This variable was included to determine whether there were
differential sentencing patterns for male and female minority defendants.

The four terms designated in Table 6 as cross products among individual
variables (BADXPERS, BADXPROP, BADXDRUG, and PERSXABC) were included to capture
effects that may differ from one subgroup to another. BADXPERS was included to
investigate the possibility that prior record may have more (or less) influence on
IN/OUT decisions for offenders convicted of Personal crimes than for offenders
convicted of some other type of crime (or equivalently, that the distinction
between Personal and Other crimes matters more for offenders with particular prior
record scores). The interactions BADXPROP and BADDRUG were included for similar
reasons. The interaction term PERSXABC was also included because it was believed
that serious Personal crimes may have had an impact beyond that expected from a
simple additive combination of the PERS and CLASABC effects.

For the New York City cases, race was coded so as to reflect separately, any
differences between Blacks and Whites and between Hispanics and Whites. The
Hispanic-White contrast was expected to have negligible effects in the Suburban and
Upstate equations due to the small number of Hispanics in these regions.
Consequently, for the regions outside New York City, race was treated as a single
variable contrasting Blacks and Hispanics with Whites and Others.

The Effect of Race

There are at least two related types of inferences that can be drawn from the results of the logit analyses. First, it can be determined whether including race in the statistical model reliably improves the precision with which one can ascertain the probability of incarceration, beyond the precision that would be obtained from considering only the more legitimate "control" factors. Second, the independent contribution of each variable to the overall probability of incarceration is reflected in the relative magnitudes of the coefficients in the model equations. Thus, one can determine the magnitude of the difference that race makes in the probability of incarceration when the other factors included in the model are held constant.

The results of the logit analyses are presented in Table 7. The percent of cases correctly classified by each model suggests that the models do have appreciable explanatory value. The variation in sentencing left unexplained by the models may be due to the influence of factors that were not available for analysis or may be simply due to unsystematic variation in judicial decision making. A set of "lack of fit" statistics (not reported) indicate that deviations of the observed data from these models are not statistically significant. The asterisks attached to the race coefficients indicate that eliminating race from consideration would significantly decrease the ability to explain the probability of incarceration in the Suburban and Upstate regions, but would not make a statistically significant difference for explaining the outcomes of the New York City cases.

TABLE 7
Results of Logit Analyses

Variable Name	LOGIT COEFFICIENTS		
	New York City	Suburban	Upstate
CONSTANT	-1.524	-0.253	-0.106
BADGUY	1.109**	0.641**	0.461**
PERS	-0.232	0.411*	0.542**
PROP	-0.336**	0.289	0.120
DRUG	-0.389**	0.238	0.219
CLASABC	0.181**	0.282*	0.738**
CLASD	0.280**	0.191**	0.263**
DOWN	0.072	0.399**	0.361**
AGERISK	0.100**	0.087	0.063
DEFSEX	0.346**	0.538**	0.454**
BADXPERS	0.238**	0.039	-0.054
BADXPROP	0.342**	0.158	0.065
BADXDRUG	0.183*	-0.085	-0.160
PERSXABC	0.041	0.035	0.233*
RACE: BLACK	0.073		
HISPANIC	0.033	0.210**	0.153**
Cases Correctly Classified:	70.0%	73.4%	70.1%

*significant at .05 level
**significant at .01 level

The magnitudes of the weighting coefficients indicate that individual variables tend to have different relative influences in different regions.[26] For example, although the degree of charge reduction (DOWN) was among the more influential variables in the Upstate and Suburban regions, its relative impact on the IN/OUT decision appears to have been much less in New York City. Also, although prior record (BADGUY) was the most influential variable in all three regions,[27] its relative impact was substantially greater in New York City.

The magnitude of the race effect, adjusting statistically for the influence of other factors, was negligible in New York City, but appreciable in the Upstate and Suburban regions. Although race was less important than prior record, it appears to have been more important than, for example, whether the offender was in a high risk age group.

The magnitudes of the weighting coefficients have a known relationship to the probabilities of incarceration. If, for a specific type of case, the corresponding codes for each variable are inserted into the model equations, the equations can then be used to calculate a composite risk score for cases of that type. The risk score is expressed as the natural logarithm of an odds ratio, and can be easily converted to a probability statement. For example, a case with a risk score of zero has a 50 percent chance of incarceration (1:1 odds). In order to illustrate the expected magnitudes of race effects in the three regions, the probability of incarceration was calculated for several hypothetical cases.

Case Studies

The probabilities of incareration in each region are presented in Table 8 for six hypothetical case studies. CASE 1-W assumes a White defendant between the ages of 20 and 30 with a prior record score of "1," arrested for a class D Person offense and convicted of a class E Person offense. CASE 1-B has the same characteristics as CASE 1-W, except that the defendant is assumed to be Black. CASE 2-W and CASE 2-B refer respectively to White and Black defendants not in the high risk age group with prior record scores equal to "1," arrested for a class B

Person offense and convicted of a Person offense one class lower than the arrest offense. CASE 3-W and CASE 3-B refer to defendants not in the high risk age group with prior record scores equal to "0," arrested for a class C Property offense and convicted of a class D Property offense.

The probabilities of incarceration for these six cases indicate that even similarly situated defendants face systematically different risks of incarceration depending on the region in which the case is decided,[28] and on whether the defendants are Black or White. The case studies also illustrate the magnitudes of these differences, and show that Black defendants face a greater risk of incarceration than Whites, especially in the Suburban and Upstate regions. The Black/White differential is largest in the middle range (around the .5 probability) where outcomes are a "toss up" in terms of the factors considered by the model. When the certainty of outcome is high based on other (legitimate) factors, race is not likely to exert a decisive influence. The data suggest that when minority status influences sentencing decisions, it does so primarily by tipping the balance toward incarceration in otherwise ambiguous cases. Among the case studies examined, race makes the greatest difference for a (probably young) Property offender with negligible prior record whose case is decided in the Suburban region.

TABLE 8

Probabilities of Incarceration for Six Hypothetical Cases

CASE	RACE	AGE 20-30	PRIOR RECORD SCORE	ARREST CLASS	ARREST TYPE	CONVICTION CLASS	CONVICTION TYPE		NEW YORK CITY	SUBURBAN	UPSTATE
CASE 1-W	White	Yes	1	D	PERS	E	PERS		.43	.63	.52
CASE 1-B	Black	Yes	1	D	PERS	E	PERS		.47	.72	.60
								DIFFERENCE	.04	.09	.08
CASE 2-W	White	No	1	B	PERS	C	PERS		.49	.73	.87
CASE 2-B	Black	No	1	B	PERS	C	PERS		.53	.81	.90
								DIFFERENCE	.04	.08	.03
CASE 3-W	White	No	0	C	PROP	D	PROP		.29	.49	.40
CASE 3-B	Black	No	0	C	PROP	D	PROP		.33	.60	.48
								DIFFERENCE	.04	.11	.08

a
 The race coefficients for New York City were not statistically significant. Therefore, the differences in probabilities displayed for New York City should be viewed as unreliable. However, the values presented do reflect real differences present in the 1980 cohort.

SUMMARY

It is clear that the empirical analysis of racial discrimination in criminal justice decision making is complex. Limiting the analysis to gross population comparisons will overstate the problem, and can produce misleading information as to whether discriminatory decision making exists. It should also be noted that analyses of formal processing decisions ignore many less visible decisions in which discrimination might operate. Harassment of minorities by system personnel, less desirable work assignments, and indifference to important cultural needs could exist, but not be systematically reflected in formal processing decisions.

Even the relatively refined analysis described in this report cannot be used to conclusively determine whether racial discrimination is a factor in the IN/OUT decision. Although this analysis did control for most of the obvious legitimate influences on sentencing decisions, other potentially important factors were not available for study (e.g., weapons use, injury to victims, or pretrial detention). If influential factors not included in the study happen to be correlated with minority status, then some of the disproportionality that is due to the omitted factors will be attributed to being a minority. For example, long-term unemployment is generally thought to help predict criminal recidivism, and, therefore, may affect judges' sentencing decisions, either directly or through the influence of pretrial detention.[29] Since the unemployment rate tends to be much higher among blacks, when employment status is considered at sentencing it tends to produce disproportionate incarceration rates for black defendants. Depending on one's ethical judgments about its legitimacy, attending to non-criminal attributes that help predict recidivism may or may not be considered discriminatory. In either case, however, it would not be possible to state conclusively that the observed disproportionality was due to race.

On the other hand, conclusive proof is not required for some purposes. Kaye has recently reviewed the use of statistical evidence in court cases alleging discrimination in jury selection and employment decisions.[30] He suggested that statistically reliable evidence of grossly disparate impact may be sufficient to establish the existence of discrimination, and to obligate responsible parties to demonstrate that the discriminatory _impact_ is not the result of discriminatory _treatment_. In the Suburban and Upstate regions of New York State, the differential

impact of race on the IN/OUT decision was large. Even when simultaneous statistical controls were introduced for age, prior record, crime type, statutory class, and charge reduction, race still emerged as an important factor in explaining these sentencing decisions. Moreover, other factors found to have been influential in previous studies and that were not available in this study are themselves normatively questionable for justifying differences among sentences (e.g., differences among judges, pretrial detention). Given the results of previous research and the statistical controls for legitimate factors employed in this study, the disproportional rates of incarceration found in the Suburban and Upstate areas provide strong evidence that black defendants were subjected to discriminatory practices.

Definitive conclusions about the role of race in these sentences would require thorough studies of sentencing practices in individual jurisdictions. However, in terms of the standards of proof suggested by Kaye, there is a prima facie case that race plays an important role in sentencing defendants from the Suburban and Upstate regions of New York State.

FOOTNOTES

[1]Long, Elton, et al. American Minorities: The Justice Issues (Englewood Cliffs, NJ: Prentice-Hall, 1975); Knowles, Lewis and Kenneth Prewitt. Institutional Racism in America (Englewood Cliffs, NJ: Prentice-Hall, 1969).

[2]Wilson, William J. The Declining Significance of Race: Blacks and Changing American Institutions (Chicago: University of Chicago Press, 1980).

[3]Reasons, Charles E. and Jack L. Kuykendall. Race, Crime and Justice (Pacific Palisades, CA: Goodyear Publishing Co., 1972).

[4]Flanagan, Timothy J., David J. van Alstyne and Michael R. Gottfredson, Eds. Sourcebook of Criminal Justice Statistics - 1981 (Albany, NY: Criminal Justice Research Center, 1981), p. 352.

[5]Blumstein, Alfred. "On the Racial Disproportionality of the United States' Prison Populations," Journal of Criminal Law and Criminology 73, No. 3 (1982), pp. 1259-1281.

[6]Dunbaugh, Frank M. "Racially Disproportionate Rates of Incarceration in the United States," Prison Law Monitor 2, No. 9 (1979), pp. 1-4; Christianson, Scott and Richard Dehais. "The Black Incarceration Rate in the United States: a Nationwide Problem," Draft Report: Training Program in Criminal Justice Education, School of Criminal Justice. State University of New York at Albany, (August 1980).

[7]Blumstein, op. cit., note 5.

[8]Ibid.

[9]Nettler, Gwynn. Explaining Crime (New York: McGraw-Hill, 1974).

[10]Flanagan, op. cit., note 4, at p. 346.

[11]Nettler, op. cit., note 9.

[12]Blumstein, op. cit., note 5.

[13]Conley, John A. and Sherwood E. Zimmerman. "Decision Making by a Part-Time Parole Board: An Observational and Empirical Study," Criminal Justice and Behavior, 9, No. 4, (1982), pp. 396-431.

[14]McNeely, R.L. and Carl E. Pope. "Race, Crime and Criminal Justice: An Overview," McNeely and Pope, Race, Crime and Justice (Beverly Hills, CA: Sage Publications 1981).

[15]Ibid.

[16]Zimmerman, Sherwood E. and Ronald L. Tracy. "Models of Sentencing Behavior," Paper presented at the Criminal Sentencing Panel of CORS-TIMS-ORSA, Joint National Meeting, (May 1981).

[17]It is estimated that between 20 percent and 30 percent of the final court dispositions had not been reported at the time the data were extracted from the CCH/OBTS file.

[18]While it is true that most convictions are obtained though guilty pleas entered in exchange for agreements to recommend or impose a particular sentence, and that prosecutors and defense attorneys are key participants in that process, judges have the final legal responsibility for sentencing and must participate in and approve of all of the resulting "plea bargains."

[19]It is interesting to note that the 2,206 probation eligible felons sentenced to New York State prisons in 1980 represented only about one-third of all those who received prison sentences. That is, about two-thirds of those sentenced to prison were incarcerated due to mandatory sentencing statutes. This suggests the powerful influence that mandatory sentencing laws had on prison populations.

[20]The category containing White defendants also included a few "Other" individuals such as Orientals, American Indians, etc. Because those groups were so sparsely represented, and because they seemed to be treated similarly to White defendants, they were combined with Whites to form a "White and Other" category.

[21]Gottfredson, Michael R. and Don M. Gottfredson. Decisionmaking in Criminal Justice: Toward the Rational Exercise of Discretion (Cambridge, MA: Ballinger Publishing Co., 1980).

[22]Ibid.

[23]Zimmerman and Tracy, op. cit., note 16.

[24]Readers who are interested in a more complete introduction to binary logit analysis and related techniques should refer to an intermediate level statistics textbook, for example: Hanushek, Eric and John Jackson. Statistical Methods for Social Scientists (New York: Academic Press, 1977).

[25]Blumstein, Alfred, Jacqueline Cohen and Harold D. Miller. "Demographically Disaggregated Projections of Prison Populations," The Journal of Criminal Justice 8, No. 1 (1980), pp. 1-26.

[26]Because the constant term is different for each region, direct comparisons of coefficients across equations can be somewhat complex. Comparisons of relative within-region contributions will be generally less misleading.

[27]Because BADGUY is a four-point scale and most of the other variables are dichotomous, one should approximately double the BADGUY coefficients to assess the relative impact of prior record.

[28]Analyses not reported here suggest that the higher risk of incarceration outside New York City is due largely to jail rather than prison sentences.

[29]McDonald, Douglas. On Blaming Judges. Criminal Sentencing Decisions in New York Courts: Are Guidelines Needed to Restrain Judges? (New York, NY), Citizens Inquiry on Parole and Criminal Justice (1982).

[30]Kaye, David. "Statistical Evidence of Discrimination," Journal of the American Statistical Association, 77, No. 380 (1982), pp. 773-783.

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