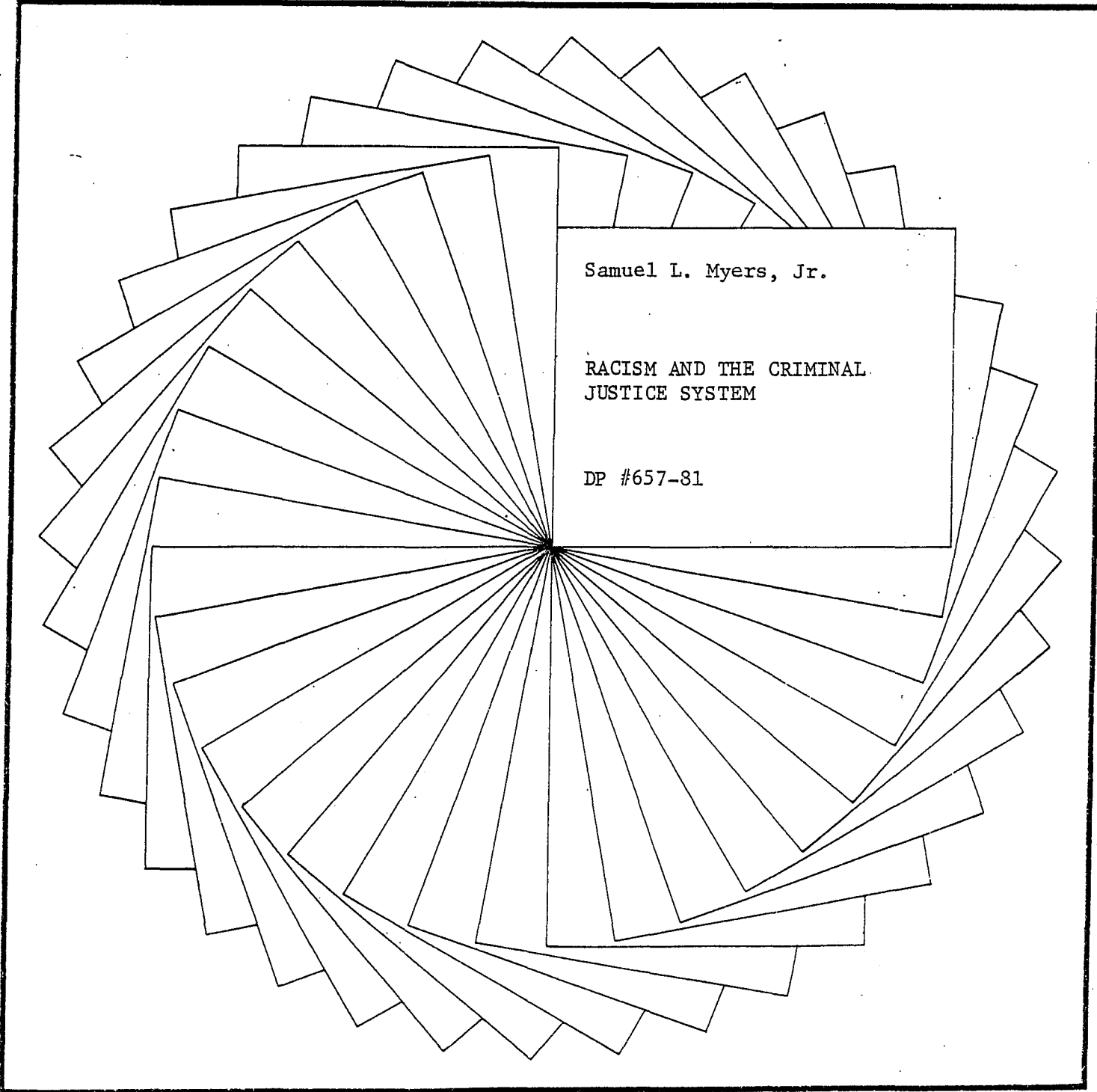# Institute for Research on Poverty

Discussion Papers

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RACISM AND THE CRIMINAL
JUSTICE SYSTEM

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Racism and the Criminal Justice System

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ABSTRACT

If racial differences in treatment of offenders in the federal

system of criminal justice were eliminated, would the racial differences

in recidivism disappear? If one believes that the source of the disparate

involvement of blacks in the criminal justice system stems from racial

factors linked to labor markets, then the answer is no. This is a view

inferred from a seminal work by Thorsten Sellin (1976). But Sellin's

analysis was based on the evolution of state prisons and not the federal

criminal justice system. In this paper I test the hypothesis that elimin-

ating racial discrimination in federal courts and prisons will reduce the

racial gap in crime. I use a sample of 2,500 felons released from United

States prisons in 1972. The findings strongly support the view inferred

from Sellin: eliminating racism in the courts and prisons will not eliminate

racial differences in crime rates. However, reducing the disparities

in pre-prison labor market opportunities will achieve that result. I find

that although pre-prison employment plays a minor role in determining

recidivism, equalizing black and white employment experience represents

one of the few means of reducing the racial gap in crime.

Racism and the Criminal Justice System

INTRODUCTION

A recent study offers intriguing documentation of a historical link
between labor markets and the criminal justice system. Thorsten Sellin
(1976) argues that the demands of labor markets have traditionally shaped
the penal system and that changes in that system through time are more
closely related to changing labor market structures than to evolving
theories of punishment. For example, the Romans, who perhaps held the
largest number of slaves in antiquity, used prisoners to work on public
projects. There was little need for prisons as we know them today because
of the continuous construction of buildings and roads under the Roman
rulers.

In the mid-seventeenth century, French prisoners manned the oars
of galleys. Originally, lifetime slavery at the oars had been a form
of commutation of death sentences, but as the demand for rowers increased,
even petty criminals were sent to the galleys. The enlarged supply of
galley convicts swelled, creating a major maintenance expense. At first,
older and infirm convicts were sent to Louisiana and the French West
Indies, but they could not match the productivity of black slaves. Hence,
in later years, alterations in the penal system were sought to deal with
this largely economic problem. Sellin suggests that the development of
industrial prisons in France was the solution.

In the United States, the crucial link between labor markets and
the penal system appears to be race. The failures in the labor market--

the poor, black, disadvantaged workers--are also the failures of the
system of justice. Blacks have lower wages, higher unemployment, and
fewer marketable skills; they are more often arrested, more likely to be
convicted, and then go to prison for longer periods than whites; they
are clearly disproportionately represented in prisons and jails. Sellin
contends that this is no accident; it is a legacy of racism and slavery.

The story goes something like this (Sellin, 1976). In the early
years of the nation, penitentiaries were designed to house criminals
from the master class. Slaves were punished through beatings or execution.
Free black criminals were sold as slaves or deported. There was, however,
a significant push to make the penitentiaries occupied by the master-class
criminals self-supporting, since the costs of imprisonment represented a
heavy burden on taxpayers. Why not make the prison turn a profit? In
Kentucky this was tried during the early nineteenth century, and the
convict-lease system was born. In this system, a profit was made by
hiring out the convicts. Attempting to fight the high prices of Northern
manufacturers and to train machine operators, other Southern states,
including Louisiana, invited private firms to set up shop in the prisons.
Following the Civil War, however, both prison industries and convict-lease
systems faced a major challenge in the South. Would these systems apply
to the newly emancipated blacks? Would the master class and the former
slaves be forced to work side-by-side? The answer was simple. Since the
economy was shattered and there was a rapid outflow of labor from the
agricultural sector--where blacks allegedly held a comparative advantage--
prisons could be used effectively as a means of continuing slavery. With

a system of penal servitude, private slavery would be replaced with public slavery. In part, the Thirteenth Amendment to the U.S. Constitution explicitly authorized "involuntary servitude" as punishment for illegal activities. Southern legislatures rushed to enact legislation and to revise their penal codes, with an almost unbelievably rapid result: Within a decade after the Civil War, prison populations in the South shifted from being virtually all white to being disproportionately black. And, so the story goes, this is how prisons have become what they are today in America.

The federal prison system serves a somewhat different constituency than do state penitentiaries. Imprisonment is a sanction in numerous sections of U.S. codes, including those relating to income tax evasion, selective-service violations, and interference with federally protected activities (e.g., civil rights violations). With the exception of punishment of residents of the District of Columbia, Indian reservations, and U.S. territories, the arm of the federal crimimal law rarely extends to common street crimes. Most forms of robbery, burglary, larcency, auto theft, assault, rape, and homicide are prosecuted at the state or local level, even though they are prosecuted nationwide at the federal level.

In addition, the origins of the federal prison system lay principally in the North, the capitalist mecca that the Southern states were competing with when they devised the convict-lease system and prison industries. In some respects, then, it is less obvious as to how the racial disparities in the federal criminal justice system are rooted in the same legacy of slavery and racism detailed by Sellin. We can easily identify the disparities,

of course. In this paper I demonstrate that specific background charac-
teristics of blacks and whites differ and that there are significant
differences in how they are treated within the federal prison system.
There are also noticeable differences in post-prison outcomes.

The important question for public policy is, How are these disparities
linked? Can the differences between black and white rearrest rates be
accounted for by diverging personal characteristics, criminal history,
type of offense committed, or other background variables? Or is the
black-white recidivism gap due to racially determined differences in
treatment? These questions require an explicit examination of the sources
of the racial gap in crime.

Although Sellin never claims that the cause of the racial gap in
crime is the legacy of slavery or racism, it is fair to conclude that
only eliminating disparities in treatment in the criminal justice system
will not be sufficient to reduce crime. By arguing that the disparities
have evolved out of labor market phenomena, Sellin implicitly rejects the
notion that merely tampering with the inequities in courts and prisons
will solve the problem of racial differences in crime. To accomplish
that objective would take something more—-it would include, among other
things, alternating how blacks and whites are treated in the economy or,
specifically, in labor markets.

It is useful, when not conducting a full-scale historical analysis,
to state one's hypothesis in the starkest form and to test it using an
empirically refutable model. The hypothesis, stated starkly, is as
follows:

> Eliminating racism in the criminal justice system will not
> eliminate racial differences in post-prison rearrest rates.

By "racism" we will mean racial differences in treatment of otherwise
comparable individuals. The criminal justice system to which we refer
is restricted, by data limitations, to the courts, prisons, and parole
boards. We measure "crime" by rearrest upon release from prison. The
model chosen to test the hypothesis is an economic model of crime. It
permits the testing of "equal treatment" hypotheses, using standard
econometric techniques. We first describe the sample; we present the model;
we then perform our test.

THE DATA

A random sample was drawn of all persons released from federal
prisons by parole, mandatory release, or expiration of sentence during
1972. The sample, consisting of 2,495 observations, was restricted to
federal prisoners with maximum sentences of more than one year and one
day who were released to the community as opposed to other legal authorities.
For each sample case, information on personal characteristics, previous
employment, criminal-justice-system characteristics, criminal history,
and offense characteristics was compiled by researchers at the U.S.
Board of Parole. Follow-up information was obtained for one year after
release from prison concerning whether the individual had been rearrested
or whether a warrant for parole or mandatory release violation had been
issued. Nearly one-third of the subjects failed in the first year to
remain free of arrest or of parole or mandatory release violations. This

percentage corresponds roughly to the first year's performance of a
similar data set reported by Hoffman and Meierhoefer (1979). Although
in subsequent years additonal subjects fail, the at-risk population for
computing the first-failure (i.e., first time to fail) rate is declining.
Hence, so Hoffman and Meierhoefer have found, the recidivism rate declines
asymptotically when calculated for at-risk populations. After six years,
however, the rates for different risk groups tend to converge. What
this means, of course, is that any significant differences in recidivism
observed for differing groups of ex-offenders one year after release may
appear less significant in later years.

In Table 1, characteristics of the United States prison sample are
summarized. These federal ex-offenders are somewhat older than many
recently released prisoners from state and local prisons. Both whites
and blacks are about 30 years old. The one-quarter representation of
blacks in the sample is decidedly lower than it is in the disproportionately
black prison population in the United States. Educational attainment at
almost 10 years is slightly higher than that for inmates generally, but
still lower than the national average. Blacks, though, had a mean school
completion rate closer to the average for all inmates in state correctional
institutions.

Employment characteristics are measured in a number of ways, as
defined in the table. "Employed more than 4 years" is a dummy variable
equal to zero if the longest job held was of a duration of less than
four years. "Longest job" equals the length, in years, of the longest
job held if and only if the longest job lasted less than four years.
"Last civilian experience" denotes whether the subject was employed·

Table 1

Description of the Federal Prison System

Variables	All Races[a]	Both Races[b] (N=2127)	Blacks[b] (N=546)	Whites[b] (N=1581)
Personal Characteristics (N=2224)				
Age (in months)	361.850	--	--	--
Age (in years)	--	30.541	30.915	30.412
Black	.254	--	--	--
Female	.049	.051	.086	.039
Grade Claimed	9.533	9.452	9.036	9.595
Married	.267	.264	.214	.281
Alcoholic	.367	--	--	--
No Drug Use	.000	--	--	--
Previously in Mental Hospital	.087	.091	.036	.110
IQ (score)	103.010	--	--	--
No Drug or Drink Use	--	.828	.855	.819
Employment (N=1557)				
Employed More than 4 Years[c]	--	.121	.104	.12
Longest Job if Less than 4 Years (in years)	1.316	--	--	--
Last Civilian Experience[c]	.789	--	--	--
On-the-Job Training	.316	--	--	--
Criminal Justice System (N=2495)				
New Commitment	.822	--	--	--
Parole Violator	.127	--	--	--
Maximum Custody	.001	--	--	--
Close Custody	.105	--	--	--
Medium Custody	.174	--	--	--
Minimum Custody	.323	--	--	--
Work Release	.195	--	--	--
Parole Hearings (number)	1.733	1.762	1.529	1.84
Release on Parole	--	.464	.358	.50
Criminal History (N=2488)				
Free Less than 6 Months	.352	--	--	--
Free More than 6 Months, Less than 36 Months	.355	--	--	--
Prior Commitment[d]	.902	--	--	--
Prior Incarcerations	2.550	--	--	--
Parole Revoked	.407	--	--	--
Incarcerations/Convictions	.368	--	--	--
Age at First Commitment (in years)	22.330	22.136	21.751	22.26
Time Served (in months)		23.992	24.696	23.74
Previous Convictions (number)	5.836	5.971	6.624	5.74
Escaped	.200	--	--	--
Prison Punishment	.288	.297	.285	.30
Commitment/Convictions	--	.130	.141	.12
First Offender	--	.102	.075	.11
Offense (N=2497)				
Robbery, Theft, Burglary	.503	.544	.483	.50
Sex Offense	.008	--	--	--
Other Violent	.019	--	--	--
Alcohol or Drug Abuse	.217	--	--	--
Less than $500	.237	--	--	--
$500 to $5,000	.101	--	--	--
Over $5,000	.059	.061	.027	.0
White Collar (forgery, counterfeiting, or fraud)	--	.228	.258	.2

Source: U.S. Board of Parole Research Unit.

Note: Unless otherwise specified, figures are proportions within sample.

[a] Listwise deletion of missing values.

[b] Excludes selective service and Immigration and Naturalization Service violators. Also excludes races other than black or white. Listwise deletion or missing values.

[c] Employed more than 4 years is a dummy variable equal to 0 if longest job held was less than four years. Last civilian experience denotes whether employed more than 25% of time in last two years preceding imprisonment.

[d] Commitments are court orders to prison, which can be suspended. Incarceration is actual imprisonment; can occur more than once for the same offense; jailed; out on bail; rejailed for hearing; released; found guilty; committed to prison.

more than 25 percent of the time in the last two years before imprison-
ment. As can be seen, only a minority of the releases had ever
worked for more than four years at a stretch. The average employment for
the rest was only about 16 months. Almost a quarter of the sample had
not worked more than 25 percent of the time in the two years preceding
imprisonment. These employment measures are all extremely correlated.
We concentrate on the "employment-more-than-4-years" variable in our
analysis.

The criminal justice system, criminal history variables, and offense
characteristics displayed in the first column of Table 1 refer to the
entire sample of nearly 2,500 cases. In much of the analysis that follows,
the sample is restricted to about 2,100 cases of blacks and whites who were
not violators of either the selective service or the Immigration and
Naturalization Service (INS) laws. Moreover, few of the many criminal
justice system variables had strong independent influences on recidivism.
We therefore highlight here only those variables included in our subsequent
analysis.

The average number of parole hearings was nearly one and three-
quarters, although the average for blacks was lower than that figure.
While half of the white sample was released on parole, only a little
more than a third of blacks were. Receiving fewer parole hearings and
being less likely to be released on parole would be understandable for
blacks if they served shorter sentences. Yet, time served--a measure
of the severity of punishment--was on average a month longer for blacks
than for whites. In addition, blacks are somewhat younger at their

first imprisonment, are less likely to be first offenders, and are less likely to have received punishment while incarcerated than are whites.

The average number of previous convictions is nearly six. This mean is slightly larger for blacks, as is the ratio of prison commitments to convictions, a measure of the certainty of punishment. The type of offense committed differs for whites and blacks also. In the entire sample, about half of the cases relate to robbery, burglary, larceny, and auto theft. By eliminating selective service or immigration violations, this fraction rises. Yet blacks are less likely to have been committed for these "serious" forms of theft than whites. Indeed, the proportion of blacks whose offenses were the white-collar crimes of forgery, counterfeiting, and fraud (which includes income tax evasion) is higher than that for whites. Nonetheless, the haul was usually smaller: blacks were less likely to have netted over $5,000 in the alleged crime than whites.

In summary, then, the federal prison-release sample differs markedly, by inspection, from the typical state prison population. Moreover, there are distinct differences between the black and the white ex-offenders, both in background characteristics and in treatment within the criminal justice system (see U.S. Department of Justice, 1979).

THE MODEL

A full discussion of the specification and estimation of the recidivism model is given in Myers (1980). Here, we can briefly describe the model of crime used. Participation in crime can be viewed as a consequence of economic choices constrained by opportunities and socio-environmental factors. As the attractiveness of illegitimate activities

increases—e.g., crime payoffs rise, or the certainty and severity of punishment fall—some people will engage in more crime. As the attractiveness of legitimate activities increases—e.g., wages rise or unemployment falls—some people will engage in less crime. The theoretical foundations for this economic model of crime have been laid by Becker (1968), Ehrlich (1973), and Block and Heineke (1975). However, the precise effects on crime of improved legitimate opportunities or heightened returns to crime cannot be ascertained by theory alone. Nonetheless, in empirical applications, measures of the returns to crime and work, along with indicators of sociopsychological factors and general background characteristics, have been employed in attempts to predict the "supply of crimes." (See Gillespie, 1978, or Witte, 1979, for a review of the economic specifications of the supply of crime function.)

In Table 2, coefficient estimates ($\hat{\beta}$) and the partial derivatives ($\partial p / \partial x_i$) of a logistic recidivism function are displayed. The general findings can be conveniently summarized. Older ex-offenders, females, and married persons are less likely to be recidivists (meaning here to be rearrested or to violate parole or mandatory release provisions). Blacks, those with fewer years of schooling, and those who have been confined to mental hospitals are more likely to be recidivists. A more stable pre-prison employment history is generally associated with a lower post-prison recidivist rate, while alcohol or drug use is associated with higher recidivist rates. More extensive criminal records and less time between incarcerations are positively related to recidivism. There is little variation in the effects of type of crime on recidivism: all

Table 2

Maximum Likelihood Estimates of the Probability of Recidivism in First Post-Prison Year
(t-statistics in parentheses)

Independent Variables	Both		Whites		Blacks	
	$\hat{\beta}$	$\partial\hat{p}/\partial x_i$	$\hat{\beta}$	$\partial\hat{p}/\partial x_i$	$\hat{\beta}$	$\partial\hat{p}/\partial x_i$
Age	-.033 (-3.868)	-.007	-.027 (-2.684)	-.005	-.059 (-3.289)	-.013
Female	-.385 (-1.553)	-.081	-.360 (-1.044)	-.074	-.508 (-1.361)	-.111
Grade Claimed	-.026 (-1.130)	-.004	-.021 (-.956)	-.004	-.038 (-.952)	-.008
Married	-.350 (-2.923)	-.074	-.314 (-2.752)	-.079	-.245 (-1.003)	-.053
No Use of Drug or Drink	-.336 (-2.648)	-.071	-.375 (-2.568)	-.077	-.424 (-1.553)	-.092
Previously in Mental Hospital	.493 (3.082)	.104	.480 (2.772)	.099	1.162 (2.371)	.253
No. of Parole Hearings	.109 (2.204)	.023	.106 (1.850)	.022	.127 (1.185)	.027
Prison Punishment	.398 (3.559)	.084	.437 (3.313)	.090	.293 (1.324)	.064
Release on Parole	.010 (.090)	.002	-.016 (-.118)	-.003	.170 (.716)	.037
Robbery, Theft, Burglary	.148 (1.120)	.031	.105 (.673)	.021	.082 (.309)	.018
White Collar Offense	.018 (.117)	.004	-.096 (-.491)	-.020	.049 (.163)	.010
Offense Value Greater than $5000	-.615 (-2.141)	-.130	-.688 (-2.071)	-.142	-.387 (-.592)	-.084
First Offender	-.312 (-1.260)	-.066	-.317 (1.260)	-.065	-.170 (-.386)	-.037
Age at First Commitment	.001 (.133)	.0003	.011 (.965)	.002	-.043 (-1.918)	-.009
Employed More than 4 Years	-.356 (-1.728)	-.075	-.264 (-1.105)	-.054	-.544 (-1.217)	-.187
Time Served	-.005 (-1.814)	-.001	-.004 (-1.279)	-.0009	-.008 (-1.217)	-.001
Commitment/Convictions	1.844 (5.607)	.390	1.546 (3.949)	.320	2.615 (4.129)	.570
Convictions	.062 (4.700)	—	.086 (5.242)	.018	.015 (.633)	.003
Constant	-.045	—	.535	—	2.219	—
Weighted Mean of Dependent Variable	.328	—	.318	—	.357	—
Predicted Probability at Weighted Means of Independent Variables	.304	—	.293	—	.321	—
Chi-Square	218.061	—	171.010	—	86.285	—

Source: Data from U.S. Board of Parole Research Unit.

categories have higher recidivism rates relative to the omitted category of "other offenses." However, ex-offenders who net over $5,000 are less likely to be recidivists: either they are adept in avoiding rearrest, or they turn to more legitimate activities. On the other hand, those who were punished while in prison, or who appeared more frequently before the parole boards, were more likely to fail, in the sense of recidivism. Finally, despite claims that paroled offenders represent a biased sample of prison releases, when controlling for other factors, release on parole has no significant effect on recidivism.

Table 2 also reveals that blacks are more prone to recidivism than whites: 35.7 percent of blacks became recidivists after release from federal prison, while only 31.8 percent of whites do so. When one controls for any number of seemingly exogenous factors, the percentages become 32.1 and 29.3 for blacks and whites, respectively (Table 2, second row from bottom). This, of course, represents a small narrowing of the gap in recidivism, but not one of a magnitude to justify further exclusion of racism or racial discrimination as a cause of the gap. But if the cause is racism, then what form of racism? Where is this elusive demon? In the courts, on the juries, in the prison cells, in the police stations, on the streets, in the workplace?

A CONCEPTUAL TEST

To illustrate one method of addressing these questions, let us examine racial differences in the severity of punishment. When released

from prison, blacks are found to have served longer sentences than whites. In addition, blacks are more likely to be rearrested or violate parole than whites. It might be contended that the differing rearrest and parole-violation rates follow from the differences in punishment. Are the observed differences in time served by blacks and whites due to differences in their ages, previous criminal records, and the types of crime for which they were convicted? Or can we assert that the differences are due to some sort of discrimination against blacks in the criminal justice system? A method has been developed in the econometric literature to compute the residual effect that race has on the outcome being investigated. Sometimes called "residual discrimination analysis," the method requires a fully specified model of how the outcome is generated, and it depends on assumptions concerning the observability of the independent variables and the lack of correlation between the error or stochastic disturbance term and the independent variables.

Suppose, in our example, time served is assumed to depend on the type of crime, characteristics of the offender, and prior criminal history of the offender. Then, to isolate the effect of race on time served, one estimates the equation:

$$TS = \sum_{i=1}^{n-1} x_i \alpha_i + x_n \alpha_n + \varepsilon,$$

where $x_1 \ldots x_{n-1}$ are n-1 independent variables measuring type of crime, characteristics of the offender, and prior criminal history, and x_n is a dummy variable equal to 1, if race is black, 0 otherwise. The α_i are the coefficients to be estimated and reflect the marginal effect on time served

of an increase in any one of the independent variables. Of course, it
is assumed that time served is linear in its arguments and that the
error term is normally distributed. Under such assumptions, ordinary
least squares is an appropriate method of estimating the coefficients
$\alpha_1 \ldots \alpha_n$. The sample then is partitioned between blacks and whites,
and the time-served equation is reestimated for both races, dropping
the race variable. Hence, we have two equations for time served:

$$TS^W = \sum_{i=1}^{n-1} x_i^W \alpha_i^W + \varepsilon^W,$$

and

$$TS^B = \sum_{i=1}^{n-1} x_i^B \alpha_i^B + \varepsilon^B,$$

where the variables are defined as before, but where superscript B denotes
black and W denotes white. The difference between white and black time
served, $TS^W - TS^B$, would be attributable to the differences in the race-
specific errors (i.e., racial discrimination), $\varepsilon^W - \varepsilon^B$, alone only if
blacks and whites were otherwise identical both with respect to background
characteristics (type of crime, criminal history, etc.) and with respect
to the effects these non-race-related characteristics (or at least so regarded
for purposes of this analysis) have on time served. Not only do blacks
and whites have very different characteristics, but also the effects on
time served of type of crime and criminal history (among other variables)
differ between blacks and whites. Suppose, however, that blacks and whites
were "treated" exactly the same, so that blacks' time served could be
computed as

$$T\hat{S}^B = \sum_{i=1}^{n-1} \hat{\alpha}_i^W x_i^B$$

where $\hat{\alpha}_i^W$ are the estimated white coefficients, and $\hat{TS}^B$ is the predicted time served for blacks if blacks and whites only differed with respect to the x's. Hence, the residual discrimination is

$$\hat{TS}^B - TS^B.$$

Conceptually ridding the system of this discrimination suggests replacing in the black recidivism equation TS^B with $\hat{TS}^B$. The question that is answered in so doing is, How much of the racial gap in recidivism can be explained by discrimination in sentencing? Of course, the same logic can be applied to questions of differing pre-prison employment, parole release, criminal history, and certainty of punishment.

Tables 3-6 present the results of the first-stage estimations needed to obtain the racially unbiased measures used to predict recidivism.

Separate black and white logistic equations are estimated for the probability of having been employed for more than four years prior to incarceration. As can be seen in Table 3, the effects of age, IQ, and education are about the same for whites and blacks. Being female has an insignificant impact on pre-prison employment for both races. Being married and not having drinking or drug problems raises pre-prison employment for both blacks and whites, although at different rates. Finally, prior mental hospital confinement has no significant effect for blacks but markedly lowers pre-prison employment for whites.

It is easy to see that blacks are less likely to have had long, stable employment before imprisonment than whites. While 12.7 percent

Table 3

Maximum Likelihood Estimates of the Probability that Pre-Prison Employment
Was Greater than Four Years
(t-statistics in parentheses)

Independent Variables	Blacks		Whites	
	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial x_i}$	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial x_i}$
Age	.107 (6.511)	.006	.100 (13.015)	.006
IQ	-.006 (-.512)	-.000	-.007 (-.959)	-.000
Female	-.336 (-.509)	-.021	.254 (.644)	.017
Grade Claimed	.124 (1.812)	.008	.122 (3.602)	.008
Married	.771 (2.472)	.049	1.003 (6.074)	.068
No Use of Drug or Drink	.917 (1.668)	.058	.353 (1.324)	.024
Previously in Mental Hospital	-.810 (-.759)	-.052	-.675 (-2.048)	-.086
Constant	-7.326 (-5.455)	--	-6.448 (-7.803)	--
Weighted Mean of Dependent Variable	.106	--	.127	--
Predicted Probability at Weighted Means of Independent Variables	.068	--	.074	--
Chi-Square	64.046	--	291.047	--

Source: Data from U.S. Board of Parole Research Unit.

of whites were employed more than four years, only 10.6 percent of

blacks were. Yet, when controlling for differences in age, education,

sex, and other background characteristics, little of the gap remains:

the predicted fraction of blacks with pre-prison employment of that

length is 6.8 percent, while for whites it is 7.4 percent.

When blacks are "treated" just the same as whites, however, the

results change dramatically. If the pre-prison employment probability

for blacks were determined by the white predictive equation but appropri-

ately evaluated at the average values of the black characteristics, then

we predict that 11.6 percent of blacks would have been employed more

than four years. This figure not only approaches the actual mean for

whites, but it also exceeds the value predicted for white ex-offenders

using the very same equation. What this means is that while much of the

employment disparity between black and white ex-offenders can be explained

by differences in background characteristics, the low employment predicted

for blacks is due largely to racial discrimination.

Blacks are less likely to be released on parole (as opposed to

release due to expiration of sentence) than whites, as shown in Table

4. The direction of effects of background variables on parole-release

probabilities is similar for both races. Better-educated, married, drug-

and-alcohol free, younger, and female ex-offenders are more likely to

be released on parole, whether they are black or white. More frequent

parole hearings and less prison punishment result in higher parole

release rates for both races. In many instances, however, these predictors

Table 4

Maximum Likelihood Estimates of the Probability of Release on Parole
(t-statistics in Parentheses)

Independent Variables	Blacks		Whites	
	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial x_i}$	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial x_i}$
Age	-.061 (-4.573)	-.013	-.057 (-9.166)	-.014
Offense Value Greater than $5000	.295 (.484)	.064	.887 (3.650)	.221
Female	.575 (1.615)	.125	.687 (2.314)	.171
Grade Claimed	.046 (1.099)	.010	.109 (4.957)	.027
Married	.495 (2.044)	.108	.488 (3.766)	.122
No Use of Drug or Drink	.950 (2.948)	.207	.218 (1.414)	.054
Previously in Mental Hospital	-.412 (-.735)	-.090	-.719 (-3.727)	-.180
Number of Parole Hearings	.848 (7.071)	.185	.761 (11.976)	.190
Prison Punishment	-.771 (-3.218)	.168	-.823 (-6.066)	-.205
Robbery, Theft, Burglary	-.249 (-.916)	-.054	-.658 (-4.321)	-.164
White Collar Offense	.304 (1.032)	.066	-.221 (-1.219)	-.055
Constant	-1.253 (-1.696)	—	-.342 (-.910)	—
Weighted Mean of Dependent Variable	.360	—	.500	—
Predicted Probability at Weighted Means of Independent Variables	.322	—	.502	—
Chi-Square	131.557	—	401.283	—

Source: Data from U.S. Board of Parole Research Unit.

are statistically insignificant for blacks. For example, while having

netted over $5,000 in the alleged crime will increase a white ex-offender's

chances of being released on parole by more than 22 percentage points,

it has a negligible effect on blacks. Moreover, taking account of these

factors merely narrows the black-white parole release gap from (.360-

.500) to (.322-.502). If, however we predict the black probability from

the white parameters, then the gap narrows to (.451-.502). Indeed, if

blacks were treated exactly like whites in parole decision-making (but,

of course, their differing background characteristics were appropriately

accounted for), then blacks and whites would be released at nearly the

same rates.

In Tables 5 and 6, estimates are provided for black and white

measures of the certainty and severity of punishment. The certainty

of punishment is computed as the ratio of previous prison commitments

to previous convictions. It is essentially the subjective probability

of being punished by imprisonment if convicted. This ratio is .049

for blacks and .039 for whites. Although being a white female means

experiencing significantly lower probabilities of punishment than being

a white male, the marginal effects of all other characteristics are

virtually zero. Hence, when these characteristics are accounted for,

the punishment probabilities for blacks and whites tend to converge.

Similarly, when the black punishment probability is predicted using

the white equation, the estimated value, .032, moves closer to the

actual value for whites. In sum, blacks experience more certain punish-

ment than whites, and a part of this can be accounted for by racial

differences in how they are treated.

Table 5

Maximum Likelihood Estimates of the Probability of Commitment
Given Conviction
(t-statistics in parentheses)

Independent Variables	Blacks		Whites	
	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial x_i}$	$\hat{\beta}$	$\dfrac{\partial \hat{p}}{\partial \hat{p}}$
Age	.062 (3.169)	.000	.0792 (7.382)	.001
IQ	.010 (.599)	.000	.024 (1.828)	.000
Female	-104.242 (-.062)	-.000	-14.387 (-5.533)	.211
Grade Claimed	-.062 (-.715)	-.000	.043 (-.824)	-.000
Married	-.615 (-1.091)	-.000	-.942 (-2.720)	-.013
No Use of Drug or Drink	-.061 (-.106)	-.000	.296 (.687)	.004
Previously in Mental Hospital	-222.771 (-.577)	-.000	.240	.003
Constant	-5.230 (-3.084)	--	-8.198 (-5.872)	--
Weighted Mean of Dependent Variable	.049	--	.039	--
Predicted Probability of Weighted Means of Independent Variables	.000	--	.014	--
Chi-Square	23.281	--	70.738	--

Source: Data from U.S. Board of Parole Research Unit.

Table 6

Ordinary Least Squares Estimation of ln (Time Served) and ln (Convictions)

Independent Variables	ln (Time Served)		ln (Convictions)	
	Whites $\hat{\beta}$	Blacks $\hat{\beta}$	Whites $\hat{\beta}$	Blacks $\hat{\beta}$
Age	.008 (8.00)	.009 (3.00)	.016 (16.00)	.029 (9.67)
Sex	-.184 (-2.52)	--	-.527 (5.55)	--
Married	.011 (.34)	-.114 (-1.84)	-.169 (-4.12)	-.165 (2.26)
No Use of Drug or Drink	.027 (.73)	-.149 (-2.04)	-.195 (-4.15)	-.097 (-1.14)
Grade Claimed	-.010 (-1.67)	-.030 (-2.73)	-.075 (-10.71)	-.039 (-3.00)
IQ	.002 (2.00)	.004 (2.00)	.004 (4.00)	-.001 (.50)
Robbery, Theft, Burglary	-.185 (-5.00)	-.510 (-7.61)	--	--
Offense Value Greater than $5000	-.243 (-5.40)	.098 (.62)	--	--
White Collar Offense	.015 (.26)	-.552 (-7.56)	--	--
Prison Punishment	.370 (11.21)	.353 (5.98)	--	--
Paroled	-.331 (-10.68)	-.246 (-4.17)	--	--
Number of Parole Hearings	.221 (17.00)	-.186 (-6.64)	--	--
Constant	2.356	2.720	1.477	1.355
Multiple R	.534	.521	.367	.418
R^2	.285	.271	.135	.175
Adjusted R^2	.280	.256	.132	.165

Source: Data from U.S. Board of Parole Research Unit.

Blacks also experience more severe punishment than whites. Recall from Table 1 that the average time served by blacks was 24.7 months, while whites served only 23.7 months. Taking account of personal background characteristics and factors related to the crime, the average time served for blacks is predicted to be 19.06 months when evaluated at the white parameters. This dramatic reduction is suggestive of the same discriminatory process involving previous criminal records. On average, blacks in the sample had 6.6 previous convictions, while whites had only 5.7. But if black convictions were generated by the same process as white convictions--if they were "treated" the same--then, appropriately taking into account black background characteristics, black convictions would total 4.5.

In summary, there are disparities between black and white federal ex-offenders in (a) pre-prison employment experiences, (b) method of release from prison, (c) certainty and severity of punishment, and (d) criminal histories. In every instance, treating blacks like whites narrows the disparity. Some of the gap, we have seen, can be accounted for principally by differences in background characteristics such as age, sex, and education. This was true of pre-prison employment. But in other categories, notably release on parole, the only way to construct any significant narrowing of the gap is to effect an equal treatment of whites and blacks.

To extend the conceptual experiment a step further, it becomes useful to replace for blacks the actual values for pre-prison employment, certainty and severity of punishment, criminal history, and method of

prison release with the predicted "discrimination-free" values. Table 7 displays reestimates of the black recidivism functions. The odd-numbered columns list the estimated coefficients and associated statistics. In the even-numbered columns are the partial derivations of the predicted probability of recidivism. First, in column 1 the black recidivism function from Table 2 is reproduced. Note that the actual failure rate is 35.7 percent and the predicted rate is 32.1 percent. In column 3, we replace the actual time served with the discrimination-free predicted value. Now the marginal effect of an extra month in prison is larger, but since blacks serve shorter sentences in this racially neutral scenario, the recidivism rate remains the same. In column 5 we insert the predicted certainty-of-punishment value. More certain punishment lowers recidivism, but racially neutral certainty of punishment means that blacks now have lower probabilities of being punished by imprisonment; hence they are more likely to be recidivists. In column 7 blacks get to be paroled at nearly the same rate as whites. But from column 1 we realize that release on parole really does not affect recidivism substantially. So equal opportunity in release from prison (or, more accurately, affirmative action in release from prison) does not assure lower rearrest probabilities. Column 11 details the effects of reducing disparities in criminal histories. Since the effect of a previous conviction record is small, equalizing this factor between blacks and whites has no effect on recidivism. However, eliminating the racial disparity in pre-prison employment has a decidedly direct effect on blacks' post-prison failure rates. The predicted recidivism probability falls from .321 to .318, as seen in column 9. Although this reduction

Table 7

Maximum Likelihood Estimates of Black Recidivism and Residual Discrimination

(t-statistics in parentheses)

Independent Variables	Recidivism[a] (1) $\hat{\beta}$	(2) $\partial\hat{p}/\partial x_i$	Recidivism With Predicted Time Served[b] (3) $\hat{\beta}$	(4) $\partial\hat{p}/\partial x_i$	Recidivism With Predicted Ratio of Commitments/ Convictions[c] (5) $\hat{\beta}$	(6) $\partial\hat{p}/\partial x_i$	Recidivism With Predicted Release on Parole[d] (7) $\hat{\beta}$	(8) $\partial\hat{p}/\partial x_i$	Recidivism With Predicted Employment[e] (9) $\hat{\beta}$	(10) $\partial\hat{p}/\partial x_i$	Recidivism With Predicted Convictions[f] (11) $\hat{\beta}$	(12) $\partial\hat{p}/\partial x_i$
Age	-.059 (-3.289)	-.013	-.041 (-1.987)	-.009	-.010 (-.414)	-.002	-.034 (-1.079)	-.007	-.029 (-.841)	-.006	-.051 (-1.850)	-.011
Time Served	-.008 (-1.423)	-.001	--	--	-.004 (-.885)	-.001	-.008 (-1.494)	-.001	-.009 (-1.556)	-.002	-.008 (-1.411)	-.001
Predicted Time Served	--	--	-.110 (-1.871)	-.024	--	--	--	--	--	--	--	--
Female	-.508 (-1.361)	-.111	-.786 (-1.894)	-.171	-.737 (-1.890)	-.162	-.811 (-1.656)	-.177	-.444 (-1.188)	-.096	-.545 (-1.010)	-.119
Grade Claimed	-.038 (-.952)	-.008	-.043 (-1.090)	-.009	-.038 (-.963)	-.008	-.089 (-1.370)	-.019	-.018 (-.419)	-.004	-.048 (-.601)	-.010
Married	-.245 (-1.003)	-.053	-.220 (-.900)	-.048	-.353 (-1.322)	-.077	-.479 (-1.380)	-.104	.046 (.129)	.010	-.263 (-.889)	-.057
No Use of Drug or Drink	-.424 (-1.553)	-.092	-.319 (-1.160)	-.069	-.266 (-.987)	-.058	-.494 (-1.723)	-.107	-.325 (-1.114)	-.070	-.449 (-1.294)	-.098
Previously in Mental Hospital	1.162 (2.371)	.253	1.177 (2.395)	.256	1.142 (2.315)	.251	1.481 (2.514)	.323	1.020 (2.012)	.221	1.191 (2.416)	.260
No. of Parole Hearings	.127 (1.185)	.027	.656 (2.068)	.143	.110 (1.033)	.024	-.203 (-.532)	-.044	.128 (1.197)	.028	.127 (1.186)	.027
Prison Punishment	.293 (1.324)	.064	1.039 (2.119)	.226	.223 (1.021)	.049	.648 (1.465)	.141	.308 (1.384)	.066	.284 (1.324)	.064
Robbery, Theft, Burglary	.062 (.309)	.018	-.237 (-.687)	-.051	.150 (.572)	.033	.380 (.917)	.083	.095 (.356)	.020	.097 (-.361)	.021
Release on Parole	.170 (.716)	.037	-.572 (-1.200)	-.124	.043 (.189)	.009	--	--	.180 (.756)	.039	.147 (.627)	.032
Predicted Release on Parole	--	--	--	--	--	--	2.385 (.974)	.520	--	--	--	--
White Collar Offense	.049 (.163)	.010	-.387 (-.917)	-.084	.137 (.457)	.030	.161 (.499)	.035	.059 (.196)	.012	.072 (.237)	.015
Offense Value Greater than $5000	-.387 (-.592)	-.084	-.435 (-.664)	-.095	-.240 (-.379)	-.052	-.747 (-.999)	-.163	-.359 (-.556)	-.078	-.402 (-.617)	-.807
First Offender	-.170 (-.386)	-.037	-.116 (-.264)	-.025	-.380 (-.879)	-.083	-.164 (-.374)	-.035	-.160 (-.367)	-.034	-.210 (-.485)	-.046
Age at First Commitment	-.043 (-1.918)	-.009	-.044 (-1.969)	-.009	-.068 (-3.348)	-.015	-.041 (-1.856)	-.009	-.049 (-2.164)	-.010	-.047 (-2.241)	-.010
Commitments/Convictions	2.615 (4.129)	.570	2.534 (4.098)	.552	--	--	2.576 (4.101)	.561	2.586 (4.035)	.561	2.519 (4.111)	.549
Predicted Commitments/ Convictions	--	--	--	--	-4.193 (-.775)	-.922	--	--	--	--	--	--

Table Continued . . .

Table 7 (Continued)

	Recidivism[a]		Recidivism With Predicted Time Served[b]		Recidivism With Predicted Ratio of Commitments/ Convictions[c]		Recidivism With Predicted Release on Parole[d]		Recidivism With Predicted Employment[e]		Recidivism With Predicted Convictions[f]	
	(1) $\hat{\beta}$	(2) $\partial \hat{p}/\partial x_i$	(3) $\hat{\beta}$	(4) $\partial \hat{p}/\partial x_i$	(5) $\hat{\beta}$	(6) $\partial \hat{p}/\partial x_i$	(7) $\hat{\beta}$	(8) $\partial \hat{p}/\partial x_i$	(9) $\hat{\beta}$	(10) $\partial \hat{p}/\partial x_i$	(11) $\hat{\beta}$	(12) $\partial \hat{p}/\partial x_i$
Convictions	.015 (.633)	.003	.012 (-.496)	.002	-.013 (-.567)	-.003	.012 (.516)	.002	.013 (.551)	.002	--	--
Predicted Convictions	--	--	--	--	--	--	--	--	--	--	-.023 (-.103)	-.005
Employed More than 4 Years	-.544 (-1.217)	-.187	-.569 (-1.274)	-.124	-.826 (-1.866)	-.181	.523 (-1.174)	-.114	--	--	-.561 (-1.247)	-.122
Predicted Employment Greater than 4 Years	--	--	--	--	--	--	--	--	-3.586 (-1.115)	-.778	--	--
Constant	2.219 (2.786)	--	3.118 (3.139)	--	1.851 (2.175)	--	1.256 (.946)	--	1.449 (1.278)	--	2.414 (1.754)	--
Weighted Mean of Dependent Variable	.357	--	.357	--	.356	--	.357	--	.357	--	.357	--
Predicted Probability of Weighted Means of Independent Variables	.321	--	.321	--	.326	--	.321	--	.318	--	.321	--
Chi-Square	86.285	--	87.709	--	70.092	--	86.738	--	86.061	--	85.939	--

Source: Data from U.S. Board of Parole Research Unit.

[a] From Table 2.

[b] Predicted values computed from Table 6.

[c] Predicted values computed from Table 5.

[d] Predicted values computed from Table 4.

[e] Predicted values computed from Table 3.

[f] Predicted values computed from Table 6.

is minor, it is seen as the only means of narrowing the recidivism
gap.

CONCLUSION

Other writers have alluded to the legacy of racism in the criminal
justice system due to slavery and its aftermath. Blacks are disproportionately
represented in the penal system: they serve longer sentences; they are
more likely to be incarcerated rather than put on probation; they are less
likely to be paroled; and, because they are more likely to be rearrested,
they are more likely to be returned to prison. Indeed, one writer has
argued that this state of affairs is intimately linked to labor markets:
after the Civil War, a loss of a whole class of workers in Southern
agriculture mandated that the prison system—already evolving as a labor-
market mechanism—supply public labor when private involuntary servitude
had been abandoned (Sellin, 1976).

Prison populations have swelled with unskilled blacks during the
past two decades. Has the penal system been operating again as a labor
market equilibrating device? Do long prison sentences, low parole-release
rates, and high rearrest rates for blacks act to buffer the high under-
and unemployment rates among members of this group? These questions cannot
be answered within the context of this study. But other kinds of questions
can be answered. Are there racial disparities in a system like the federal
prison system, which is less beholden to the slavery past? Are these
disparities linked to one another? And, if they were eliminated, would
crime rates fall?

We conclude that in the federal prison system, seen through a
sample of nearly 2,100 ex-felons released in 1972, there are significant
racial disparities in treatment. And there are apparent racial differences
in post-prison outcomes. Although there are only minor differences in
pre-prison employment experiences, equalizing those experiences represents
about the only means of reducing the racial difference in recidivism.
Blacks and whites experience differing certainty and severity of punish-
ment, yet equal treatment in that area will not close the gap between
whites and blacks in post-prison recidivism. Blacks and whites are treated
differently in the prisons; and blacks are decidedly less likely to be
released on parole. Yet equal treatment in those areas will not close
the gap between races in recidivism. Blacks and whites have different
criminal records; unfortunately, equalization of previous criminal
histories does nothing to close the racial gap in rearrests. Equal
treatment in pre-prison employment, we have found, will reduce the post-
prison recidivism gap, though by only a small amount. Thus we reach the
following pessimistic conclusion: Eliminating racism or racial discrimination
.as it manifests itself in experiences of offenders before or during
imprisonment will have little impact on post-prison lapse into criminal
behavior.

At first glance this conclusion appears inconsistent with the
progressive views advanced by authors, like Sellin, of works on prison
reform. If eliminating racism will not reduce crime, why bother to
tamper with the vestiges of the past? But our results suggest another
interpretation. While eliminating racial discrimination in the courts

and prisons may not reduce the racial gap in crime, neither will it widen the gap. The longer prison sentences, the higher parole denial rates, and the higher prison commitment rates for blacks--all amount to harsher treatment to no avail. In the economist's jargon, this sort of equilibrium is "Pareto-inefficient." The inefficiency comes about because the added public expenditures for incarcerating blacks more frequently and for periods of greater duration relative to whites are not matched by offsetting benefits. Black crime rates do not fall appreciably, at least among released felons. And so there is no apparent gain by meting out more severe punishment to them relative to truly comparable white offenders. Hence, the moralistic cry that the unequal treatment of blacks and whites in the criminal justice system is <u>unfair</u> is not heard alone; the unequal treatment is clearly and unambiguously <u>inefficient</u>.

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