Journal of Quantitative Criminology, Vol. 6, No. 3, 1990

Race and the Probability of Pleading Guilty

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The legal ramifications of pleading guilty and findings of an interdependence between pleading guilty and sentence severity suggest that the guilty plea decision is a significent turning point in case processing. The present research examines the variables affecting the probability of pleading guilty. The first analysis involves estimating a single probit equation of main effects of variables previously found to be related to pleading guilty. A second analysis is conducted estimating the same equation separately for black defendants and white defendants. Findings from the first part of the analysis indicate that physical evidence, number of charges, and confessing to the crime during police/prosecutor interrogation increase the probability of pleading guilty, whereas the number of witnesses, use of a weapon, and offenses carrying a minimum penalty of 5 years in custody with no maximum prison term decrease the probability of pleading guilty. Findings from the second analysis indicate that the effect of marital status, prior record of felony convictions, type of counsel, number of charges, and use of a weapon on the probability of pleading guilty varies by defendant's race. The research concludes by offering several competing explanations of these findings in hope of stimulating further research on the variables affecting the route of case disposition in felony processing.

KEY WORDS: guilty plea; race interactions effects; perceptions of injustice; probit.

1. INTRODUCTION

Research on the criminalization process has indicated an interdependence across decisions (Lizotte, 1978; Myers and Hagan, 1979; Feeley, 1979). Decision making at one stage of court processing affects subsequent decisions, either limiting choices of action and/or creating an operational context within which punitive sanctions are imposed. The decision to plead guilty, the subject of this research, manifests both of these consequences. The latter effect is evidenced in numerous empirical studies (La Free, 1985; Brereton and Casper, 1981–1982; Uhlman and Walker, 1980, 1979; Heumann, 1978). This body of research indicates that defendants who plead guilty, compared to those who pursue a trial, receive less severe sentence.

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0748-4518/90/0900-0315$06.00/0

This finding suggests that guilty plea dispositions extract less resources from the criminal justice system and are rewarded by a more lenient sentence. Although there is some disagreement over this relationship (Feeley, 1979; Eisenstein and Jacob, 1977; Rhodes, 1978), more recent research findings, cited above, support the contention that pleading guilty is a salient operational context within which judicial and prosecutorial discretion is exercised.

In terms of the former effect, of limiting the defendant's course of action, the guilty plea places the defendant in a restricted legal position by disallowing future collateral attacks of the conviction process (Littrell, 1979). The legal ramification of the decisions in the Brady trilogy [*Brady v. U.S.* (397 U.S. 1969), *McMann v. Richardson* (397 U.S. 759 1969), and *Parker v. North Carolina* (397 U.S. 742 1969)] is to deny the right to challenge the process resulting in the guilty plea disposition. Violations of due process that may have induced the plea are not subject to scrutiny by a higher court. Once the guilty plea is filed the conviction is final. The defendant is left with no recourse of action to challenge the procedures of arrest or search and seizure or the manner in which a confession is obtained. Put simply, informally coerced pleas are free of external review. This legal ramification of pleading guilty is a basis for the inherent attractiveness to the prosecutor, police, and judge of such dispositions (Littrell, 1979; Chambliss and Seidman, 1971).

The legal ramification of pleading guilty and the findings of the interdependence of the guilty plea with the sentencing decision strongly suggest that the decision to plead guilty is a significant turning point in case processing, one which warrants further study of the factors that contribute to the probability of this disposition. The present research involves, first, estimating a single multivariate probit equation including only main effects followed by, second, estimating the same model separately for black defendants and white defendants. This methodological approach to examining race differences in decision making avoids problems of overlooking suppressed nonadditive race effects (Miethe and Moore, 1986).

2. LITERATURE REVIEW

In recent years research has shifted from an interest in accounting for the widespread use of guilty pleas to an interest in identifying the variables that influence the likelihood that a defendant will plead guilty. The use of multivariate statistical analysis has extended our understanding of the *net* contribution of variables such as offense severity and prior record on the probability of a guilty plea disposition. Further research is needed to identify the influence of case characteristics, defendant characteristics, and pro-

cedural outcomes net of the effect *evidence* exerts on whether the defendant pleads guilty or goes to trial.

Mather (1979) found that seriousness of the case and strength of the prosecutor's case increased the chances of a guilty plea disposition. Her findings, based on two- and three-way cross-tabulations, offer insight into the guilty plea process but do not provide a rigorous test of the relationship among defendant characteristics, evidence, pretrial release, offense severity, and the route of case disposition. These variables have been identified as important to the guilty plea decision (Feeley, 1979; Lizotte, 1978; Myers and Hagan, 1979). Miller (1980), addressing the same relationship as Mather (1979), found that strength of the evidence and seriousness of the offense increase the chances of a guilty plea. Again, Miller was unable to control for variables that are potentially salient to the guilty plea decision.

Myers and Hagan's (1979) analysis of 980 felony cases processed in Marion County, Indiana, found that a trial disposition increases with strength of evidence, prior record of convictions, recovery of a weapon, amount of bond, and victim blamelessness and credibility. In addition, trial dispositions are more likely when the victim is older, a male, and employed. They suggest that these findings indicate how the law is socially constructed on the basis of legal and social categories.

A third study relevant to the present research is Miethe and Moore's (1986) multivariate analysis of charge reduction and sentence negotiation—a special case of guilty plea cases. They found that the number of offenses and initial offense severity increases the chances of a charge reduction and female defendants having less chance of a reduction. Moreover, they found that record of convictions, initial offense severity, and charge reduction negatively affect sentence negotiation. Their finding of no statistically significant *main* effect of race on either charge reduction or sentence negotiation is of particular interest to the present research.

Miethe and Moore's (1986) analysis is methodologically similar to the present research. Challenging earlier research findings of the inconsequential effect of defendant's race on outcome decisions (Spohn *et al.*, 1982; Kleck, 1981; Hagan and Bumiller, 1983; Unnever *et al.*, 1980; Lizotte, 1978; Hagan, 1974), Miethe and Moore found support for their assertion that an " 'additive' model commonly used in past research suppresses the nature and magnitude of racial differences (1986, p. 218)." Specifically, they found that

> blacks are more likely to receive a concession if they are less educated, use weapons, are charged with multiple offenses, and when the initial charge is less severe. In contrast, the likelihood of a negotiated sentence is enhanced among whites if they are single, processed in a nonmetropolitan area, have no prior felony convictions, and do not receive a charge reduction. Similar to blacks, whites are more likely to receive such a sentencing concession when the initial

> charge is less severe. Contrary to their black counterparts, educational status, weapon, and number of alleged offenses had no discernible impact on the likelihood of a negotiated sentence among whites. (1986, p. 227).

The importance of Miethe and Moore's research is in providing empirical support for testing race differences by estimating both main (additive) and interactive effects of race with other legal and extralegal variables. However, for several reasons their findings have limited generalizability to my research. First, their analysis was conducted on only *convicted* felons and on a subset of guilty plea cases, namely, those cases for which an explicit negotiation occurred. Prior research (Rosett and Cressey, 1976; Utz, 1978; Feely, 1979) has shown charge reduction and sentence negotiation guilty pleas to be a subset of cases pled guilty. It is not uncommon for a guilty plea to be obtained without an explicit charge reduction or a sentence negotiation. In the present research 20% of the guilty pleas involved neither of the above. Second, Miethe and Moore's research was conducted on a sample of felony cases ($N = 1659$) for which 89% of the cases involved white defendants, with the remaining 11% involving black defendants. This race distribution is highly unusual for felony cases. The 60/40 split on defendant's race, reflected in the present data (see Table I), is more representative of felony cases than the 11/89 split found in their data.

Finally, a significant difference in the present research from that of Miethe and Moore's study is the inclusion of four types of evidence variables and information on the defendant's pretrial release status. These variables have been found to be important to the decision to plead guilty (Mather, 1979; Feeley, 1979) and, therefore, should be included in the analysis as control variables in an estimation of both main and interaction effects of defendant's race on the probability of pleading guilty. Miethe and Moore's analysis does not include these variables.

In summary, the above studies have examined, in varying levels of statistical sophistication, direct or main effects of variables on the likelihood of pleading guilty. Except for Miethe and Moore's (1986) study in Minnesota, the recent interest in estimating race interaction effects at other stages of case processing (Farnwork and Horan, 1980; Peterson and Hagan, 1984; Kleck, 1981; Unever *et al.*, 1980; Zatz, 1984) has *not* extended to the guilty plea decision. The absence of similiar examination of pleading guilty is surprising given Mileski's (1971)[2] observational study of misdemeanor and felony cases that found race interactions with offense severity. Similar

[2]Mileski's findings are based on an analysis of charges of which 81% are misdemeanors. Charge seriousness was trichotomized into serious misdemeanors, minor misdemeanors, and felonies. Caution should be exercised in making comparisons of her findings and those reported herein since my research is conducted on felony charges only.

Table I. Descriptive Statistics on Variables in the Analysis of the Probability of a Guilty Plea Disposition ($N = 464$)

Variable	Code	Frequency	%
Race	(0) White	185	40
	(1) Black	279	60
Marital status	(0) Single	390	84
	(1) Married/common law	74	16
Number of felony convictions within last 5 years	Interval	$\bar{X} = 1.03$ SD = 1.51	
Physical evidence	(0) No	92	20
	(1) Yes	372	80
Eyewitness ID	(0) No	160	35
	(1) Yes	304	65
Number of witnesses	Interval	$\bar{X} = 6.41$ SD = 4.48	
Use of a weapon	(0) No	297	64
	(1) Yes	167	36
Offense severity			
Off (1) reference category	(1) Up to 5 years	214	46
Off (2)	(1) Minimum 5 years; maximum 20 years	154	33
Off (3)	(1) Minimum 5 years; maximum no ceiling	96	21
Total number of charges	Interval	$\bar{X} = 3.56$ SD = 4.07	
Bail status	(0) Released	168	36
	(1) Detained	296	64
Type of counsel	(0) Court appointed	253	55
	(1) Privately retained	211	45
Confession	(0) No	215	46
	(1) Yes	249	54
Disposition	(0) Trial	112	24
	(1) Plead guilty	352	76

to the earlier research using two- and three-way cross-tabulations, Mileski was unable to control for a number of variables that have since been found to affect statistically significantly the guilty plea decision.

3. HYPOTHESIZING RACE DIFFERENCES IN THE PROBABILITY OF PLEADING GUILTY

Miethe and Moore (1986), Farnworth and Horn (1980), Peterson and Hagan (1984), Petersilia (1983), and Kleck (1981) have pursued the question of whether decision making in felony cases operates differently for black

defendants than for white defendants. Zatz (1985) extended race differences to include Chicanos in an analysis of movement through the criminal justice system. Justification for posing differential case processing is provided by theorists from the labeling perspective, radical criminology, and conflict theory. To date, a definitive conclusion continues to elude social scientists. Most of this research has focused on examining differential case processing at the sentencing stage (Zatz, 1985; Peterson and Hagan, 1984; Miethe and Moore, 1986; Farnworth and Horan, 1980; Welch *et al.*, 1984, Kleck, 1981) or at the bail stage (Farnworth and Horan, 1980; Albonetti *et al.*, 1989), with one study examining race differences in charge reduction and sentence negotiation (Miethe and Moore, 1986). These studies examined the question of whether black defendants are exposed to a "separate" system of justice than whites. By focusing largely on outcome decisions (bail and sentencing), research has failed to examine race differences in actual *processing*, namely, whether the case went to trial or was pled guilty.

In his distinction between the due process model and the crime control model of the criminal justice system, Packer (1976) points to differences in case processing emerging from differences in actors' values. Packer's two models represent two very different notions of justice expressed in how cases are moved through the system. It is important to note that the two forms of justice are tied to processing decisions and not to outcome severity decisions, with the guilty plea unambiguously reflecting the nonadversary processing of cases. I suggest that it is this nonadversarial route of case disposition that is perceived to pose the greatest threat to black defendants. In light of the legal differences in case processing presented by a guilty plea and a trial disposition, this paper suggests that to understand whether black defendants are exposed to a different or separate process of justice, the question must be studied not only in terms of outcome severity but also in terms of the decision to plead guilty.

4. DATA AND METHODOLOGY

Data were obtained on 464 felony cases processed in Norfolk, Virgina, during the period 1977–1978. The data[3] are part of a larger data set gathered by Miller *et al.* in 1978. Due to the small number of female defendants in the data, the analysis is performed on only male defendants. Table I provides

[3]Norfolk, Virginia, is one of the five jurisdictions for which data were collected. The decision to include only the Norfolk jurisdiction in the analysis is due to the substantial incompleteness of the data on the remaining jurisdictions. The data were obtained from the Inter University Consortium for Political and Social Research. The Consortium is not responsible for the analysis herein.

descriptive statistics and coding for each of the variables in the analysis. The defendant's race, marital status, and prior record of felony convictions are included in the analysis to examine the net impact of defendant characteristics on the likelihood that a case is pled guilty. Four evidence variables are included in the analysis; whether there is physical evidence, whether there is an eyewitness to the incident, the number of witnessess, and whether

Table II. Probit Estimates, Standard Errors and Change in Probability for Variables in the Guilty Plea Equation

Variable	Probit estimate (SE)	Change in probability (ΔP)[a]
Race (1)	−0.31*	−0.11
	(0.20)	
Marital status (1)	0.10	
	(0.21)	
No. of adult felony convictions	−0.08**	−0.02
	(0.04)	
Physical evidence	0.40**	0.11
	(0.17)	
Eyewitness ID (1)	−0.03	
	(0.16)	
No. of witnesses	−0.07***	−0.02
	(0.02)	
Weapons (1)	−0.76***	0.28
	(0.20)	
Total No. of charges	0.11***	0.03
	(0.03)	
Offense severity		
(2)	0.24	
	(0.22)	
(3)	−0.41*	−0.14
	(0.22)	
Bail status (1)	0.15	
	(0.22)	
Type of counsel (1)	−0.22	
	(0.18)	
Confession (1)	1.12***	0.21
	(0.16)	
Intercept	0.59**	0.72
−2 log likelihood	131.76	
Degrees of freedom	13	

[a]Change in probabilities reported for statistically significant estimates and theoretically meaningful variables.

*Significant at $P < 0.20$.

**Significant at $P < 0.05$.

***Significant at $P < 0.01$.

the defendant confessed to the alleged offense. Previous research typically has failed to include effects of these four types of evidence.

Information on the use of a weapon in committing the offense is included for the purpose of measuring the net impact of a situational variable that may increase the perceived seriousness of the offense over and above statutory severity. Two offense-related variables, offense severity and total number of charges, are also included in the analysis. A procedural variable, whether the accused was detained at the bail hearing, is estimated in light of research findings that indicate offenders who are detained are more likely to plead guilty than those who are released (Myers and Hagan, 1979; Lizotte, 1978; Feeley, 1979). Type of counsel is treated as a dummy variable to obtain the contrast effect of private counsel vs court appointed.

This research employs a probit analysis modeling the probability of a guilty plea disposition. The obtained probit estimates are derived through an iterative fitting procedure yielding maximum-likelihood estimates which are asymptotically consistent, normally distributed and efficient (Aldrich and Nelson, 1984). The probit model with k explanatory variables and a binary dependent variable is

$$P(Y=1|X)=\Phi(\Sigma b_k X_k)=\int_{-\infty}^{\infty}\Sigma b_k X_k \exp(-u^2/2)/\sqrt{2\pi}\, du \qquad (1)$$

where

$Y_i \in \{0, 1\}, \quad i=1, \ldots, N;$
$P(Y_i=1|X_i)=\Phi(\Sigma b_k X_k)$ (unit normal cumulative density function);
$Y_1, Y_2, \ldots, Y_N$ are statistically independent; and no exact or near-linear dependencies exist among the X_k's.

Equation (1) provides the coefficient values reported in Tables II and IV.

5. FINDINGS

Table II provides the probit estimates, their standard errors, and the change in probability (ΔP)[4] for the variables included in the equation predicting the probability of a guilty plea disposition. Consistent with expectations, black defendants are less likely than white defendants to plead guilty ($b=-0.31$; $P<0.20$). The average black defendant is 0.11 less likely to plead guilty than his white counterpart. It is important to note that the

[4]As is conventional, the change in probability is evaluated at the mean of the dependent variable.

negative effect of race on the probability of pleading is obtained net of the separate effects of the four evidence variables, measuring the strength of the prosecutor's case. The interdependence of decision making in the criminal justice system is examined by the effect of bail status on the probability of pleading guilty. Feeley (1979) argued that being detained at the bail hearing serves to increase the accused's chances of pleading guilty because of the pains of confinement and the chances of having their "dead time" in jail during prosecution apply toward their final sentence. Consistent with Feeley's suggestion, being detained ($b = 0.15$) increases moderately, but not statistically significantly, the probability of pleading guilty.

Table II further indicates that defendants represented by a privately retained counsel are less likely to plead guilty ($b = -0.22$) but the negative coefficient fails to attain statistical significance at either $P < 0.05$ or $P < 0.10$. Contrary to some prior research (Mather, 1979) but consistent with Miethe and Moore's (1986) findings, the data indicate that a record of felony convictions does decrease the probability of pleading guilty. The effect of $b = -0.08$ ($P < 0.05$) corresponds to a 0.02 decrease in the probability of pleading guilty for each unit change in the number of adult felony convictions. A similar negative effect is produced by number of witnesses ($b = -0.07$, $P < 0.01$). In addition, Table II indicates that a statutory severity greater than 5 years in prison with no upper limit of imprisonment compared to the reference category statistically significantly decreases ($b = -0.41$, $P < 0.05$) the probability of pleading guilty. For the average defendant, a unit change in this variable produces a 0.14 decrease in the probability of pleading guilty.

Table II indicates that using a weapon produces a statistically significant effect on the probability of pleading guilty ($b = -0.76$, $P < 0.01$). For the average defendant, using a weapon decreases the probability of pleading guilty by 0.28. Furthermore, the data indicate that marital status, eyewitness identification, bail status, type of counsel, and statutory severity greater than 5 years and up to 20 years do not significantly influence the guilty plea disposition.

The differential effect of the four evidence variables is of particular interest. Physical evidence exerts a strong, positive and statistically significant ($b = 0.40$, $P < 0.01$) effect on the probability of pleading guilty, as does the effect of confessing to the offense ($b = 1.12$, $P < 0.01$), yet eyewitness identification ($b = -0.03$, $P > 0.10$) and the number of witnesses exerts a negative effect ($b = -0.07$, $P < 0.05$), with only the latter achieving statistical significance. It is suggested that the importance of evidence to the guilty plea process should be understood in light of the amount of leverage the particular type of evidence provides the prosecutor in pressing for a guilty plea. Only physical evidence and confessing to the offense influences the

guilty plea decision as suggested by Mather's "dead bang" case. When the strength of evidence is dependent on witnesses, who must be managed successfully if a trial is pursued, the effect is negative and negligible. The leverage the prosecutor exerts to obtain a guilty plea arises from the almost indisputable nature of physical evidence (Albonetti, 1987) and is not forthcoming from witness generated evidence. From these findings further clarification of the sources of prosecutorial strength as related to the guilty plea process is shown to be related to the uncertainty surrounding a trial disposition. Given the findings of a negative main effect of defendant's race on the probability of pleading guilty and the earlier findings of Miethe and Moore (1976) suggesting the inadequacy of estimating only additive effects of race, I now extend the analysis to an examination of race-specific effects on the probability of pleading guilty.

6. RACE-SPECIFIC EFFECTS

Thus far the present analysis indicates that black defendants, compared to white defendants, are less likely to plead guilty than go to trial. Although the main effect of race is not significant at $P < 0.05$, the magnitude and direction of the effect are consistent with my hypothesis. Following Miethe and Moore's argument of the need to pursue race differences by estimating race interactions with other variables in the equation, I estimate the equation in Table II separately for black defendants and white defendants. Before examining the results of this procedure, attention is directed to the descriptive statistics provided on each of the variables by defendant's race.

The percentages reported in Table III indicate that black defendants are more often detained (72%) during pretrial processing than white defendants (51%), they are less likely to retain private counsel (38%) than white defendants (56%), black defendants are less likely to confess to charges (46%) compared to white defendants (65%), they are more likely to use a weapon in committing the alleged offense (43%) compared to white defendants (25%), and black defendants are more likely to be charged with an offense that carries a punishment of greater than 5 years but not greater than 20 years (40%), whereas white defendants are more likely to be charged with an offense carrying a penalty of less than 5 years. For offenses with penalties of greater than 5 years with no specified upper limit, there is little percentage difference between black defendants (19%) and white defendants (23%). Finally, black defendants are more likely (70%) than white defendants (59%) to face a prosecutor who has at least one eyewitness who can identify the defendant as guilty of the crime. These percentages indicate that case characteristics do vary across defendant's race and may account for differences in the probability of pleading guilty. But do these differences

Table III. Descriptive Statistics on Variables in the Analysis of the Probability of a Guilty Plea Disposition by Race

Variable	Code	Black ($N = 279$)		White ($N = 185$)	
		f	(%)	f	(%)
Marital status	(0) Single	240	(86)	150	(81)
	(1) Married/common law	39	(14)	35	(19)
Number of felony convictions within last 5 years	Interval	$\bar{X} = 1.04$ SD = 1.45		1.01 1.59	
Physical evidence	(0) No	60	(22)	32	(17)
	(1) Yes	219	(78)	153	(83)
Eyewitness ID	(0) No	84	(30)	76	(41)
	(1) Yes	195	(70)	109	(59)
Number of witnesses	Interval	$\bar{X} = 6.72$ SD = 4.82		5.95 3.87	
Use of a weapon	(0) No	158	(57)	139	(75)
	(1) Yes	121	(43)	46	(25)
Offense severity					
Off (1), reference category	(1) Up to 5 years	113	(40)	101	(54)
Off (2)	(1) Min. 5; max. 20 years	112	(40)	42	(23)
Off (3)	(1) Min. 5; max., no ceiling	54	(19)	42	(23)
Total number of charges	Interval	$\bar{X} = 3.44$ SD = 4.12		3.73 4.00	
Bail status	(0) Released	78	(28)	90	(49)
	(1) Detained	201	(72)	95	(51)
Type of counsel	(0) Court appointed	172	(62)	81	(44)
	(1) Privately retained	107	(38)	104	(56)
Confession	(0) No	150	(54)	65	(35)
	(1) Yes	129	(46)	120	(65)
Disposition	(0) Trial	84	(30)	28	(15)
	(1) Plead guilty	195	(70)	157	(85)

account for the race differences in the probability of pleading guilty? Estimating the equation in Table II separately for black defendants and white defendants addresses the subtle effect of race on the probability of pleading controlling for the potential importance of other case information on the probability of pleading guilty. Table IV provides the probit estimates, their respective standard errors, and the corresponding predicted probability for variables of interest.

Comparing the direction and magnitude of the parameter estimates for blacks defendants and whites defendants indicates that being married, compared to being single, exhibits a substantially different impact for black than for white defendants. The average black defendant who is married or

Table IV. Probit Estimate, Standard Errors, and Change in Probabilities for Variables in the Analysis of Pleading Guilty Estimated Separately for Black Defendants and White Defendants

	Black defendants		White defendantss	
	Probit estimate (SE)	Change in probability (ΔP)[a]	Probit estimate (SE)	Change in probability (ΔP)[a]
Marital status (1)	0.74*	0.20	0.05	0.01
	(0.29)		(0.33)	
No. of adult felony convictions	−0.15*	−0.05	−0.01	−0.002
	(0.06)		(0.08)	
Physical evidence (1)	0.44*	0.13	0.40	0.08
	(0.22)		(0.32)	
Eyewitness ID (1)	−0.22		0.12	
	(0.21)		(0.27)	
No. of witnesses	−0.07*	−0.02	−0.09*	−0.02
	(0.03)		(0.03)	
Weapon (1)	−1.06**	−0.40	−0.01	−0.002
	(0.26)		(0.42)	
Total No. of charges	0.08*	0.03	−0.18*	−0.04
	(0.04)		(0.08)	
Offense severity				
(2)	0.18		0.20	
	(0.29)		(0.44)	
(3)	0.46		−0.60	
	(0.31)		(0.34)	
Bail status (1)	0.13		0.32	
	(0.29)		(0.38)	
Type of counsel (1)	−0.66*	−0.33	0.34	0.07
	(0.27)		(0.37)	
Confession (1)	1.28**	0.26	0.97**	0.13
	(0.21)		(0.27)	
Intercept	−0.84		0.04	
	(0.41)		(0.55)	
−2 log likelihood	104.23		33.80	
Degrees of freedom	12		12	

[a] Change in probabilities reported for statistically significant estimates and theoretically meaningful variables.

*Significant at $P < 0.05$.

**Significant at $P < 0.01$.

living in a common-law relationship is 0.20 more likely to plead guilty than his unattached counterpart, yet the average white defendant who in the same marital status has only a 0.01 increase in the probability of pleading guilty. Table V indicates that the difference in probit coefficients is statistically significant ($t = 2.38$, $P < 0.05$).[5]

Representation by a privately retained counsel compared to a court-appointed lawyer exerts a statistically significant negative impact on the dependent variable for black defendants. Yet for white defendants, no statistically significant effect is obtained. Furthermore, the effect of counsel is suppressed (see Table II) until an interaction between counsel and race is estimated. This statistically significant difference ($t = -3.33$, $P < 0.001$) indicates that the process affecting the probability of a guilty plea disposition is race specific. The probit estimate ($b = -0.66$, $P < 0.05$) for black defendants corresponds to a 0.33 decrease in the probability of pleading guilty. Black defendants are less likely than white defendants to retain counsel (see Table III), but when they do, their case is processed in an adversarial manner by going to trial. On the other hand, the probit estimate for retaining private counsel is not statistically significant for white defendants. However, it is useful to point out that when white defendants are represented by private counsel, there is a 0.07 increase in the probability of pleading guilty. Clearly, the effect of retaining private counsel varies substantially depending on defendant's race, net of the variables included in the equation.

Table V. Statistics for differences in the Value of the Probit Coefficients Estimated Separately for Black Defendants and White Defendants

Variables	t statistic	Significance level
Marital status	2.38	$0.05 > P > 0.02$
No. of adult felony convictions	−2.33	$0.05 > P > 0.02$
No. of witnesses	−0.66	NS
Physical evidence	0.16	NS
Weapon	−3.18	$0.01 > P > 0.001$
No. of charges	4.33	$P < 0.001$
Type of counsel	−3.33	$P < 0.001$
Confession	1.35	$0.10 > P > 0.05$

[5]See Smith (1984, p. 36) for the t test of the difference between pairs of probit coefficients across equations:

$$t = (b_1 - b_2) \Big/ \sqrt{\frac{(V_1)[\mathrm{SE}(B_1)]^2 + (V_2)[\mathrm{SE}(B_2)]^2}{V_1 + V_2}}$$

where b_i = probit coefficient for population i, $v_i = N - K - 1$ for population i, and $\mathrm{SE}(B_i)$ = standard error of coefficient for population i.

Table IV indicates that using a weapon in committing the offense operates differently for black defendants compared to white defendants. This difference in the effect of weapon across race groups is statistically significant ($t = -3.18$, $P < 0.01$). Using a weapon continues to exert a strong and negative impact ($b = -1.06$, $P < 0.01$) on the probability of pleading guilty, but for whites the magnitude of the impact is negligible and statistically nonsignificant. Black defendants who used a weapon in committing the alleged crime have a 0.40 decrease in the probability of pleading guilty, while white defendants have a 0.002 decrease. A further discussion of this finding follows in the next section.

Table IV indicates that the effect of having a record of felony convictions is also race specific. The effect is negative for both groups, yet the magnitude of the probit estimate is stronger for black defendants than for white defendants. The probit coefficient of -0.15 ($P < 0.05$) translates into a 0.05 reduction in the probability of pleading guilty. The statistically nonsignificant effect of -0.01 for white defendants corresponds to a 0.002 decrease in probability. For black defendants the effect of having a prior record is substantially different than for white defendants, indicated by the statistically significant difference in probit estimates ($t = -2.33$, $P < 0.05$). This finding is pursued further in the next section.

Black defendants for whom the prosecuting attorney possesses physical evidence, a strength of case measure, have a 0.13 increase in the probability of pleading guilty. The statistically nonsignificant 0.40 probit estimate of physical evidence for white defendants corresponds to a 0.08 increase in probability. However, it is noted that the difference in probit coefficients ($t = 0.16$) is nonsignificant.

Another measure of the strength of the prosecutor's case is the number of witnesses available if the case goes to trial. It is suggested in prior research (Mather, 1979) that the strength of the case increases the chances of pleading guilty. Examining the effect of this variable separately for black defendants and white defendants indicates that the effect appears to be similar for both defendant groups. The obtained probit estimate value of -0.07 corresponds to a 0.02 decrease in the probability for black defendants, the same decrease in probability for each unit change in the number of witnesses produced for white defendants. Referring to Table V, we note that the difference in the probit coefficients ($t = -0.66$) fails to achieve statistical significance.

For the average black defendant each unit increase in the number of charges produces a 0.03 increase in the probability of pleading guilty, whereas for white defendants each unit increase produces a 0.04 decrease in probability. Table V indicates that the race difference in the probit estimate of number of charges on the probability of pleading guilty is significant ($t = 4.33$, $P < 0.001$).

Finally, confessing to the police or the prosecutor exerts a significant impact both for black defendants and for white defendants. However, when a black defendant confesses to the charge, there is a greater likelihood of pleading guilty compared to when a white defendant confesses. For the average black defendant who confesses, there is a 0.26 increase in the probability of pleading guilty, but for the average white defendant who confesses there is a 0.13 increase in probability. The race difference effect of this variable on the probability of pleading guilty approaches significance ($t = 1.35$, $P < 0.10$). In summary, the findings reported in Tables IV and V indicate that the effect of number of felony convictions, type of counsel, use of a weapon, number of charges, and marital stuatus on the probability of pleading guilty *varies* by defendant's race.

7. IMPLICATIONS AND CONCLUSIONS

These data suggest that, controlling for offense severity, prior record, presence of physical evidence, eyewitness identification, pretrial release, type of counsel, and whether the defendant confessed, black defendants are less willing to accept the seemingly routine process of case disposition through a guilty plea. Littrell (1979, pp. 205–206) has argued that "the approximately 90% of defendants who plead guilty rather than go to trial occupy a special relation to the criminal justice system in legal theory as well as in practice." Those who plead guilty, by sheer fact of their plea, forfeit the opportunity of collateral attacks on the processes leading to the plea. As noted earlier, one implication of this is that once accused individuals have pled guilty, they cannot exercise the constitutional right of review of the procedures of conviction, including the procedures of obtaining a confession.

One explanation could be that black defendants exhibit less confidence in a system in which bargains are struck in the dark. The exchange process involved in pleading guilty is replete with uncertainty and ambiguity for the accused. Judges are not legally bound by the bargains obtained through a guilty plea and therefore the accused has no assurance of the end product for which he has bargained away his right to a trial and the benefits that are associated with a trial such as subsequent appeals based on illegal procedures.

The data suggest that black defendants, compared to white defendants, are less willing to cooperate with a process resulting in a guilty plea form of justice. Of particular interest is the finding of race differences in the effect of type of counsel on the probability of pleading guilty. Note that in Table II the main effect of private counsel representation decreases, yet not statistically significantly, the probability of pleading guilty. However, when

the effect of private counsel is estimated separately for black defendants and white defendants (Table IV), the differential effect of this variable is uncovered. The original negative effect of retaining private counsel on pleading guilty continues only for black defendants and is statistically significant at $P < 0.05$. For white defendants a different finding emerges. Although the coefficient estimate is not statistically significant, it is important to note that for white defendants, retaining private counsel increases the probability of pleading guilty. A possible explanation of this finding is that black defendants are less likely to plead guilty because the attorneys they retain are unable to negotiate a desirable settlement. A second explanation could be that their attorneys are not as adversarial in representing the defendant's interests.

A third explanation is suggested by Hagan and Albonetti's (1982) research on race differences in perceptions of injustice in the criminal justice system. In a national survey they found that black respondents compared to white respondents have a different perceptual model of the criminal justice system. Controlling for the respondent's class, educational level, income, region of the country, age, and gender and whether the respondent is a center-city resident, the research indicated that black respondents, compared to their white counterparts, were more likely to report perceptions of unequal treatment of poor suspects by the police, court officials, and defense attorneys. Moreover, blacks were more likely to report a perception that the courts disregard the defendant's constitutional rights. Their research indicated that the greatest race differences in perceptions of injustice had to do with those court actors participating in guilty plea arrangements. On the other hand, race differences were least in perceptions of the court as being politically influenced, a dimension of injustice somewhat removed from the guilty plea considerations.

Hagan and Albonetti's (1982) findings *may* point to an unwillingness on the part of black defendants to place themselves in the vulnerable position of pleading guilty. One possible explanation of the findings herein is that because of their distrust[6] of how the criminal justice system operates, blacks who become defendants are less likely to plead guilty. This tentatively suggests that race differences in pleading guilty and race interaction effects reported herein can be understood, in part, in terms of the protections a trial affords defendants regardless of race. Compared to a guilty plea, a trial disposition provides a more rigorous testing of the "facts" of the case and provides the defendant, upon conviction, with the opportunity to have an independent judicial review of the procedures leading to the conviction.

[6]Without direct measures of defendant's distrust of the criminal justice system, I offer this explanation with caution.

As a consequence, the defendant who chooses to go to trial places himself/herself in a less vulnerable position, one that is independent of judicial and prosecutorial discretion to honor the guilty plea arrangement. A defendant's agreement to plead guilty is usually contingent on an implicit, impersonal trust that the prosecuting attorney and other actors involved in the negotiation will indeed manipulate the system to the defendant's relative advantage in exchange for the plea.

Previous research has indicated that the goal of guilty plea dispositions is the avoidance of uncertainty and potential risk to the participants (Blumberg, 1967; Casper, 1972; Littrell, 1979). The prosecutor and the defense counsel obtain a faster settlement of routine cases, the judge obtains a judgment that is beyond appeal, and the police have seemingly successfully enforced the law. In light of this, I cautiously suggest that for the black defendant, the guilty plea, which offers no formal means of scrutiny, increases uncertainty given their reported perceptions of injustice characterizing the criminal justice system. Future research must address this possibility.

The findings reported in Tables II and IV raise the question of whether black defendants *refuse* to cooperate with a process of prosecution that serves to reduce the bureaucratic and administrative uncertainty of court officials and law enforcement agents yet simultaneously is the source of their own uncertainty and ambiguity. In light of prior research indicating (a) the plea negotiation process as prosecutor and defense dominated (Blumberg, 1967; Alschuler, 1968, 1975; Mather, 1979; Littrell, 1979; Rosett and Cressey, 1976; Buckle and Buckley, 1977), (b) the bureaucratic efficiency and finality resulting from guilty plea dispositions (Littrell, 1979), and (c) the frequent distrustful relationship between defendant and defense attorney (Blumberg, 1967), one may conclude that the race differentials in the probability of pleading guilty and the race interactions with serious aggravating circumstances (use of a weapon and number of felony convictions) uncover a hesitancy among black defendants to cooperate with a bureaucratic method of justice. Perhaps, in the jurisdiction under study, black defendants are offered less desirable settlements than their white counterparts, thus accounting for the lower probability of pleading guilty. Perhaps black defendants are less trustful of a process in which they have little, if any, input. Concerns for whether the "settlement" will be honored in court by the judge would follow from such distrust. An examination of the questions raised herein and the suggested possible explanations of the findings requires additional research on sentencing practices, charge reduction, and plea settlements, with direct measures of defendant's trust of the criminal justice system. With such data, explanations of race differences in the effect of number of felony convictions, number of charges, marital

status, use of a weapon, and type of counsel on the probability of pleading guilty can be tested directly.

Referring again to Table IV, the data provide some support for the suggestion that black defendants are less likely to plead guilty due to a distrust in the process and outcomes of the system. Black defendants who used a weapon in committing the alleged crime are much less likely to plead guilty than white defendants. For white defendants, use of a weapon is unrelated to how the case is disposed. I suggest that with an escalation in seriousness of the case associated with using a weapon, black defendants are very unlikely to plead guilty. In other words, as case seriousness increases due to the aggravating circumstance of using a weapon, so does the black defendant's, not white defendant's, unwillingness to pursue a negotiated route to conviction. Further support for this argument is found in the interaction effect of race and the number of felony convictions. Again, for black defendants as the record of felony convictions (another measure of seriousness of aggravating circumstances) increases, the probability of pleading guilty decreases substantially and statistically significantly. For white defendants, the effect of prior record is negligible and statistically nonsignificant. These two interaction effect comparisons suggest that in situations in which aggravating circumstances increase the seriousness of the case, and offer a negative basis for judicial discretion at sentencing, black defendants are less likely to plead guilty. As noted earlier, limitations of the data preclude a rigorous test of a direct link between these perceptions and black defendants' lower probability of pleading guilty. However, the analysis herein indicates that any attempt to understand the factors that exert an influence on how a criminal case is channeled through the criminal justice system must examine interactions among case-specific variables, evidence, type of counsel, prior record, and defendant's race in estimating the probability of pleading guilty. One cannot assume that factors affecting the likelihood of a guilty plea are invariate by race.

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