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An Integration of Theories to Explain Judicial Discretion*

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Based on an integration of work on uncertainty avoidance in decision making with research on causal attribution in punishment, the author hypothesizes that judges attempt to manage uncertainty by developing "patterned responses" that are the product of an attribution process involving assessments of the offender's likelihood of committing future crime. Washington, D.C., felony sentencing data generated by the Prosecutor's Management and Information System (PROMIS) were used to test this integrated theoretical model. Support for the theoretical integration is provided by the evidence of the effects of prior record, defendant's race, use of a weapon, pretrial release, and the interaction between defendant's race and bail outcome on sentence severity. Contrary to common suppositions, information on defendant-victim relationship and victim provocation was unrelated to sentence severity. Further research should examine judges' attempt to reduce uncertainty by relying on stereotypes and attributions linked to the likelihood of recidivism.

The finding of early studies of judicial discretion exercised at sentencing (Green 1961, 1964; Johnson 1957) suggested that defendant's race was associated with harsher sentences, stimulating considerable research on the effect of extralegal variables on sentencing severity. Wolfgang and Reidel (1973) and Hagan (1974) were the first to challenge the bivariate relationship between race and severity, suggesting that it would diminish with statistical controls for offense severity and prior record of convictions. Hagan (1974) further noted that in studies during the late 1960s and early 1970s, the race effect was small in magnitude. Since the initial challenge, there has been a voluminous amount of empirical research couched within a legal/extra-legal debate influenced by opposing assumptions about the operations of the criminal justice system (Chambliss and Seidman 1971; Horton 1966; Quinney 1970, 1972).

Research findings about race, however, have been inconsistent. Several multivariate studies have shown that black and Hispanic offenders received more severe sanctions than other groups (Levin 1977; Pope 1975a; Sutton 1978; Uhlman and Walker 1980; Unnever, Frazier, and Henretta 1980; Zatz 1985). Alternatively, Greenwood et al. (1973) and Bernstein, Cardascia, and Ross (1977) found that black defendants fared better than white defendants at sentencing. Miethe and Moore (1986) found that race interacts with other variables in its effect on sentence severity. Spohn, Gruhl, and Welch (1981-82) concluded that black defendants received more severe sentences than white defendants due to their more serious offense history.

Pursuing further the influence of extra-legal variables on sentencing outcome, Farrell and Swigert (1978a, 1978b), Hagan, Nagel, and Albonetti (1980), and Spohn, Gruhl, and Welch (1981-82) found a direct effect of socioeconomic status on sentence severity. In contrast, Lizotte's (1978) research in Chicago indicated an indirect effect of socioeconomic status and race on sentence outcome via an effect on whether the defendant was released during pretrial processing. Other research (Burke and Turk 1975; Chiricos and Waldo 1975; Nardulli 1979; Thomson and Zingraff 1981) failed to find a significant effect of socioeconomic status on sentence severity.

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Research on gender differences in sentencing also indicates inconsistent findings. Atkinson and Newman (1970), Baab and Fugerson (1968), Hagan, Hewitt, and Alwin (1979), Newman (1966), and Pope (1975b) found that female defendants receive more lenient sentences, while Farrell and Swigert (1978a; 1978b), Hagan, Nagel, and Albonetti (1980), and Unnever, Frazier, and Henretta (1980) found no statistically significant effect of gender on sentencing.

As part of the move to introduce appropriate control variables, interest has extended to estimating the effects of earlier decision outcomes (bail, plea) on judicial discretion. Studies with this focus (Balbus 1973; Bernstein, Cardascia, and Ross 1979; Hagan 1975a, 1975b; Hagan, Hewitt, and Awin 1979; Lizotte 1978; Miethe and Moore 1986; Smith 1986; Uhlman and Walker 1979;) provide inconsistent findings. However, the most common finding is that defendants released during pretrial processing and defendants who plead guilty receive more lenient sentences.

Recent research has continued to focus on racial discrimination and disparity by examining the effect of selection bias on estimates of the effect of legal and extra-legal variables (Hagan and Parker 1985; Peterson and Hagan 1984; Zatz 1985; Zatz and Hagan 1985). Taken together, these studies indicate a need for estimating determinants of sentence severity with statistical controls for bias due to selection into the convicted group.

A review of sentencing research indicates progress toward greater statistical rigor and model specification but with little development of a theoretical framework for understanding the inconsistent findings of the effect of the extra-legal variables (i.e., race, ethnicity, gender, and class position) and the consistent findings of the effect of defendant's prior record of conviction on sentence severity. While labelling and conflict theories have since the 1960s provided the perspectives from which the legal/extra-legal debate emerged, little theoretical formulation has followed in the past two decades of sentencing research. The lack of theoretical development may result from a singular interest in uncovering discrimination in the exercise of discretion and a neglect of explanations of the consistent findings of the influence of prior record, bail outcome, and guilty plea. Excepting the work of Farrell and Swigert (1978a), with interest centering on the net effect of extra-legal variables on sentence severity, factors such as prior record of conviction, typically treated as a legally relevant variable, are relegated to a secondary, or peripheral place in discussions of judicial decision making. In an attempt to stimulate further theory development, the research herein presents an integration of two theoretical perspectives on discretionary decision making and uses this integration as the basis for generating empirical specifications and hypotheses for main and interaction effects in an analysis of the variables affecting sentence severity.

Theoretical Perspective

The theoretical perspectives for this research are the structural organizational approach represented in the work of March and Simon (1958; Simon 1957), and Thompson (1967) and the social psychological orientation evidenced in the work of attribution theorists such as Carroll and Payne (1976; Carroll 1978), Fontaine and Emily (1978), Hawkins (1980, 1981), Livermore (1978), and Shaver (1975). The salience of these two theoretical perspectives to judicial sentencing decisions lies in each perspective's sensitivity to discretionary use of information in decision making.

Structural organizational theorists assert that rational choice models of decision making provide a useful point of departure for understanding the exercise of discretion. To be fully rational a decision must be made with knowledge of all possible alternatives, though in reality decision makers rarely, if ever, possess complete information (Simon 1957). The underlying supposition is that complete knowledge eliminates uncertainty in decision making and decision outcomes. In the situation of having incomplete knowledge, the actor attempts to

reduce uncertainty by relying upon a rationality that is the product of habit and social structure.

According to Simon (1957: 102-103), these limits to decision making rationality are overcome through organizational arrangements such as established operating procedures, a division of labor, a hierarchy of authority, formal channels of communication, professional training, and, finally, indoctrination. These structures absorb uncertainty resulting in a "bounded rationality" (March and Simon 1958:109). The result is decision making made on the "basis of past experience, stereotypes, prejudices, and highly particularized views of present stimuli" (Clegg and Dunkerley 1980:265). Decision makers seek to achieve a measure of rationality by developing "patterned responses" that serve to avoid, or at least, reduce uncertainty in obtaining a desired outcome. According to these theorists, problem solving is based on a limited search for "satisficing" rather than optimizing solutions.

Pursuing further a theory of uncertainty avoidance in decision making, Thompson (1967) identifies two dimensions around which decision makers organize efforts to reduce uncertainty. He suggests that uncertainty surrounding (1) beliefs about cause and effect relationships, and (2) preferences among possible outcomes is crucial to understanding the use of discretion. Of the two dimensions, uncertainty associated with cause and effect relationships is particularly salient to judicial exercise of discretion at sentencing. This dimension of uncertainty relates offender characteristics, case processing outcomes, and punishment to the goal of reducing the likelihood of recidivism.

In large urban courts with a well defined division of labor, as the one under study, sentencing judges do not exert direct influence on early pretrial processing decisions. Thus, they have little, if any, control over the certainty and celerity of processing, but they do control punishment severity. This observation is essential to specifying the sources of uncertainty in decision making relevant to the sentencing decision. From an uncertainty avoidance perspective, case information salient to reducing recidivism will affect judicial discretion. The direction of the effect is dependent on whether the information increases or decreases the likelihood that the offender will avoid future criminal activity. In other words, proponents of this perspective would argue that in the face of uncertainty characterizing the link between sentence severity and likelihood of recidivating, case information thought to predict future criminal behavior is expected to increase the severity of the sanction imposed. Conversely, case information stereotypically thought to decrease the likelihood of recidivating is expected to decrease sanction severity.

March and Simon's (1958) concept of "patterned response" provides a link to the second theoretical perspective useful to an understanding of discretionary decision making, that of causal attribution in punishment. The development of "patterned responses" in decision making situations characterized by high discretion can be further understood by the theoretical framework found in the work of Carroll and Payne (1976), Hawkins (1980), and Shaver (1975). Drawing from Heider (1958), these theorists suggest that judgments of causality are premised on both personal and environmental forces that are thought to contribute to behavior. Shaver (1975) maintained that individuals attribute causation in terms of the above two forces.

Shaver (1975) examined the relationship between the perceiver's characteristics and attributions of responsibility. Hawkins, referring to Shaver's work, notes that

perceivers' attributional choice may affect their perception of remedies or control mechanism needed where perceived behavior is negatively valued. Crime represents a form of negatively valued behavior, and criminal punishment represents a means of control. Therefore, the perception of criminal behavior may involve processes of attribution and perceptions for punishment. For example, a perceiver may believe that a violent criminal offender is an aggressive person or alternatively that environmental factors precipitated the criminal act. Perceptual differences such as this may in turn lead to conclusions regarding the possibility of the offender's rehabilitation potential, the threat posed to society, and the type of criminal sanction imposed (Hawkins 1981: 280).

Fontaine and Emily (1978) investigated the relationship between causal attribution and judicial discretion among municipal court judges. Relying on verbal statements made by the judge at the time of sentencing, Fontaine and Emily concluded that judges do attribute meaning to past and future behavior consistent with stereotypes associated with membership in such social categories. Their findings are consistent with Lippman's (1922) research showing a link between social category and attributions of particular traits and behaviors and Stephan's (1975) work indicating that membership in a certain social category influences verdicts and sentences. Also consistent, Carroll (1978) found that "the higher the stability of the attributions regarding the cause of the parole applicant's offense, the higher is the Board member's prediction of the risk of future crime, and the more reluctant he or she is to grant parole" (1978:1510).

Based on the work on uncertainty avoidance and causal attribution in punishment, judges would attempt to manage uncertainty in the sentencing decision by developing "patterned responses" that are themselves the product of an attribution process influenced by causal judgments. Judges would rely on stereotypes that link race, gender, and outcomes from earlier processing stages to the likelihood of future criminal activity. Imposing punishment in the criminal justice system, similar to other highly discretionary decisions, is the result of "satisficing" or simplifying causal assumptions in an effort to achieve rationality.

In summary, uncertainty surrounding the sentencing decision arises from an inability to predict accurately future criminal behavior. Using defendant characteristics, circumstances of the crime, and case processing outcomes, judges assess the defendant's disposition toward future criminal activity. Attributions of a stable and enduring disposition are expected to increase sentence severity. Attributions of a temporary or situational involvement in crime are expected to decrease sentence severity. These attributions provide a basis for arriving at rational decision in a domain of responsibility characterized by uncertainty. Carroll and Payne (1976) refer to this simplification of decision making as involving causal attribution about the crime and the offender.

Combining the two perspectives on discretionary decision making provides a useful reconceptualization of sentencing research. This reconceptualization provides an understanding of prior research findings indicating the importance of such case information as defendant's race, gender, prior record of conviction, and earlier decision outcomes to the sentencing decision. Discrimination and disparity in sentencing decisions, the underlying focus of the legal/extra-legal debate, may be the product of judicial attempts to achieve a "bounded rationality" in sentencing by relying on stereotypical images of which defendant is most likely to recidivate.

Data and Methodology

Data generated by the United States Attorney's Office were obtained on 2,158 felony cases processed in the Superior Court of Washington, D.C., during 1974.¹ Table 1 provides descriptive statistics on the variables included in the analysis.

In the literature review section, research on interdependency across decision stages in the criminal justice system was reported in terms of the effect of bail outcome and pleading guilty on sentence severity. A second type of dependence across decision stages that may affect

1. The data are the Prosecutor's Management and Information System (PROMIS) for 1974. Prior to analysis, I discovered a substantial amount of data missing on the dependent variables. Using a matching scheme based on six variables, I obtained case identification numbers thus allowing for retrieval of the missing data using court records. Few data sets on felony procession contain information on strength of evidence. I rely on these data because of the presence of four measures of evidence. Such information is particularly important given my concern for controlling for sample selection bias by estimating the variables affecting the probability of a conviction.

sentence severity is a statistical one that is expressed in correlated errors between the conviction equation and the sentencing equation. More specifically, unmeasured variables affecting the likelihood of conviction may be correlated with unmeasured variables that affect the sentencing decision, producing a correlation between error terms on the two endogenous variables. Without inclusion of information on how cases are screened into the sentencing stage (conviction), estimates of the effect of variables included in the sentencing equation may be biased (Berk 1983; Berk and Ray 1982; Klepper, Nagin, and Tierney 1983).²

In order to control for incidental selection bias in the coefficients of the variables affecting sentence severity, I follow a two equation estimation procedure (Berk, 1983; Berk and Ray 1982; Heckman 1976, 1979; Klepper, Nagin, and Tierney 1983). The first equation is a probit model of the probability of conviction. The endogenous variable is a variable dummy coded "0" when the defendant is acquitted and "1" when the defendant is convicted. The equation is

$$\text{Probit}(P_i) = X_i B^* \quad (\text{Eq.1})$$

where P_i is the probability of the i th defendant being convicted, X_i is a row vector of regressors, and B^* is a column vector of parameters. The second equation is an OLS regression equation indicated by

$$Z = A_i v + \theta_i \lambda_i + E_i \quad (\text{Eq.2})$$

where Z is sentence severity, $A_i v$ is a set of explanatory variables and parameters; λ_i is a regressor (here the hazard rate of being convicted) obtained from equation 1 with θ_i as its regression coefficient, and E is an error term. The regression coefficient of θ_i is the estimator of the covariance between the errors in the first equation and the second equation. Estimates for both equations are generated by Maximum Likelihood.

Finally, a "dummy" variable is estimated for each missing data category on the exogenous variables included in the equations. This procedure is followed for the purpose of controlling for any non-random process producing the missing data (Cohen and Cohen 1983).

Empirical Specifications

Table 1 indicates the variables included in the analysis with information on their respective coding, frequency distribution, and percentages. Below I discuss each exogenous variable as it relates to uncertainty avoidance theory or causal attribution in punishment theory, categorizing the exogenous variables included in the analysis of sentencing outcomes into one of the following four types of information: (1) defendant characteristics (race, gender, prior record of felony convictions), (2) mitigating/aggravating circumstances (defendant/victim relationship, whether the victim provoked the incident, and the use of a weapon), (3) characteristics of the criminal event (type and degree of social harm, the legislatively defined maximum penalty provided the offense), and (4) earlier process decisions (bail, plea).

(1) *Prior Record of Felony Convictions (RECORD)*. Under the uncertainty avoidance and causal attribution merger, it is hypothesized that a prior record of felony convictions will increase sentence severity since such information indicates a heightened risk of recidivating. Within a decision making context characterized by uncertainty of achieving a positive, non-recidivist response to correctional efforts, having a prior record suggests a stable disposition toward future criminal behavior, and is relied upon to determine sentence severity.

2. For a more statistical discussion of threats to internal validity posed by selection bias, refer to Heckman (1976, 1979) and Goldberger (1982).

Table 1 • Descriptive Statistics and Coding for Variables in Conviction and Sentence Severity Equations

Variables	Code	Conviction (N=2158)		Sentencing (N=1996)	
		%	Freq	%	Freq
Crime	(1) No person harm/ No property harm	3	55	3	54
	(2) No person harm/ Potential property harm	17	374	17	348
	(3) No person harm/Real property harm	19	413	20	392
	(4) Potential person harm/ No property harm	4	84	4	78
	(5) Potential person harm/ Potential property harm	4	94	4	87
	(6) Potential person harm/ Real property harm	29	625	29	571
	(7) Real person harm/ No property harm	24	513	23	466
Statutory Severity (STATSEV)	(1) 1-3 yrs/\$500	2	43	3	41
	(2) 3 yrs/\$1000	2	45	3	42
	(3) 5 yrs/\$5000	10	226	10	210
	(4) Up to 10 yrs/\$1000	12	156	12	248
	(5) 2-5 yrs	46	984	45	903
	(6) 10 yrs	13	288	13	263
	(7) 5-50 yrs	3	56	3	52
	(8) 20 yrs/\$5000	5	100	4	87
	(9) 20 yrs to life	5	114	5	107
	(10) Life	2	46	2	43
Weapon (WEAP)	(1) No	43	917	43	857
	(2) Yes	34	740	35	692
	(3) Missing	23	501	22	447
Prior Record	(1) No	43	917	42	842
	(2) Yes	57	1241	58	1154
Race	(1) White	5	116	6	111
	(2) Black	95	2042	94	1185
Gender	(1) Male	93	2007	93	1860
	(2) Female	7	151	7	136
Defendant/Victim Relationship (RELV)	(1) Acquaintance	17	373	18	352
	(2) Intimates	2	47	2	40
	(3) Strangers	47	1014	47	944
	(4) Missing	34	972	33	660
Victim Provoked (VICP)	(1) No	81	1758	82	1636
	(2) Yes	3	48	2	43
	(3) Missing	16	352	16	317
Bail	(1) Non-financial release	60	1295	60	1198
	(2) Financial release	40	863	40	798
Plea	(1) Trial	27	557	21	415
	(2) Guilty Plea	73	1581	79	1581
Defendant Arrested at Scene (ARSC)	(1) No	32	682		
	(2) Yes	54	1175		
	(3) Missing	14	301		
Corroborative Evidence (CORR)	(1) No	21	459		
	(2) Yes	63	1365		
	(3) Missing	16	334		
Exculpatory Evidence (EVD)	(1) No	81	1746		
	(2) Yes	3	74		
	(3) Missing	16	338		

Table 1 (Continued)

<i>Variables</i>	<i>Code</i>	<i>Conviction (N=2158)</i>		<i>Sentencing (N=1996)</i>	
		<i>%</i>	<i>Freq</i>	<i>%</i>	<i>Freq</i>
Dependent Variables					
Conviction	(0) Acquitted	9	189		
	(1) Convicted	92	1996		
Sentence Severity	(1) Probation			58	1152
	(2) Fine			1	29
	(3) Probation/Fine			1	25
	(4) < 6 months min. custody			4	76
	(5) 6 - 11 months min.			6	117
	(6) 1 yr. minimum/3 yr. max.			8	149
	(7) 1 yr. minimum/6 yr. max.			4	79
	(8) 2 yr. minimum/6 yr. max.			4	79
	(9) 2 yr. minimum/ > 6 yr. max.			2	47
	(10) 3 yr. minimum/9 yr. max.			2	39
	(11) 4 yr. minimum/ > 9 yr. Max.			4	75
	(12) 5 yr. minimum/ > 15 yr. max.			4	88
	(13) 10 - 15 yr. min. / up to life			2	41
		N = 100 1996			

(2) *Offense Type (CRIME)*. Information on offense type is collapsed into a seven-category variable, with each category reflecting a cross-classification of level of harm (none, potential, real) with the object of harm (person, property). The offense categories are contrasted with the reference category—no harm to person, no harm to property. This category includes victimless crimes (Schur 1965) such as gambling, procuring, and possession of drugs. The object of harm as measured in this typology allows an examination of the relationship between the social dimensions of crime and the decision as to sanction severity. The dimension of object of harm (person/object) is a measure of the immediacy of harm. Here immediacy is a continuum indicating direct contact between the victim and the defendant. For example, a crime that involves an immediate harm is one in which there is no space between the perpetrator and the object of the harm. Burglary 1,³ murder, and robbery are offenses that fall into this category.

On the other hand, the real harm to property/potential harm to person situation presents a direct harm to property but also an indirect, less immediate harm to the property owner. An assault on the property of an individual represents a symbolic assault on the owner. Therefore, crimes involving either potential or real harm to an object represent a social harm of less immediacy. The six dummy variable contrasts of social harm associated with type of offense are included in the analysis as control variables.

(3) *Defendant's Race (RACE)*. From a merger of uncertainty avoidance and causal attribution theory, I suggest defendant's race influences sentencing due to stereotypical images relating race to location in a social group thought to account for a disproportionate amount of crime (Blackenburg 1976; Burke and Turk 1975; Chambliss and Liell 1966; Green 1961, 1964;

3. Burglary is divided into two types: Burglary I involves breaking and entering without breaking any dwelling used as a sleeping apartment in any building with intent to break and carry away any part thereof if any person is in any part of the building; Burglary II is defined as breaking and entering or entering without breaking in any dwelling with intent to break or carry away any part thereof whether occupied or not at the time.

Skolnick 1966; Stinchcombe 1963; Sutherland 1949; Willick, Gehlker, and Watts 1975). Fontaine and Emily's (1978) research indicates that judges rely on stereotypes linking social categories to recidivism. Additional research has linked race with perceptions of high risk of recidivating (Miethe and Moore 1986), race to notions of dangerousness (Farrell and Swigert 1978a; Zatz 1985) and to a label of "normal primitive" (Swigert and Farrell 1977). In light of this, it is hypothesized that black defendants, compared to white defendants, will receive more severe sentences.

(4) *Gender*. Female defendants, compared to male defendants, are attributed a lower probability of future criminal behavior. This attribution decreases uncertainty and is expected to reduce sentence severity.

(5) *Use of a Weapon (WEAP)*. Hawkins (1981) and Shaver (1975) suggest that decision makers link characteristics of the offender and offense (violence) to judgments of likelihood of future criminal activity and threat to society, which in turn, affect punishment severity. Drawing from this assertion, I suggest that judges attribute stable enduring causes to offenders who use a weapon in committing a crime. Such attributions are expected to increase sentence severity, controlling for statutory severity.

(6) *Defendant-Victim Relationship (REVL)*. Due to a number of mitigating circumstances common to crimes between intimates, judges are more likely to attribute situational rather than enduring causes (Shaver 1975) to these defendants. I hypothesize that uncertainty in the assessment of the defendant's risk of future criminal behavior is reduced by the perceived situational aspects of the crime and are, therefore, expected to decrease sentence severity. On the other hand, crimes against strangers are likely to be perceived as indicative of stable, enduring criminal traits and will increase uncertainty of a deterrent effect and thus increase sentence severity.

(7) *Victim Provoked the Offense (VICP)*. Case information indicating that the victim provoked the offense is a mitigating circumstance that is expected to influence sentence severity. It is hypothesized to reduce severity by suggesting a situational cause of the crime, reducing uncertainty that the defendant will recidivate.

(8) *Pretrial Release Outcome (BAIL)*. As noted, early decisions in the criminal justice system have been found to affect the sentence decision (Miethe and Moore 1986; Lizotte 1978; Bernstein, Kelly, and Doyle 1977). Typically, previous research has coded the bail variable for the purpose of measuring the effect of detention on sentence severity. However, given my interest in examining the effects of uncertainty, I code the variable for the purpose of measuring the actual magistrate decision rather than whether the defendant made bail or not. It is hypothesized that defendants who receive a financial bail outcome were judged as unreliable respondents (more likely to jump bail) to system imposed constraints on their behavior. As a result of this attribution, sentencing judges are likely to impose a more severe sentence. Put simply, the early magistrate assessment of non-responsiveness becomes salient information to the sentence severity decision. Offenders labelled as non-responsive to the system are likely to be viewed as non-responsive to correctional or treatment efforts, and are thus likely to receive a more severe sentence than defendants labelled as system responsive. At the center of this interrelatedness between processing outcomes is a judgment of a defendant's commitment to future criminal activity. This system created image of a poor risk is hypothesized to affect sentence outcome via an effect on bail outcome.

(9) *PLEA*. Earlier research has reported a negative relationship between the route of case disposition and sentence severity (Mather 1979; Nardulli 1979; Neubauer 1974; Newman 1966; Uhlman and Walker 1979; Vetri 1964). These findings have not gone without challenge. Eisenstein and Jacob (1977) and Smith (1986) questioned the negative relationship between the two variables. Nevertheless, Brereton and Casper (1981-82), Dawson (1969), and Rosett and Cressey (1976) report that it is common for judges at the sentencing decision to reward with lenient sentences offenders who accommodate the system by pleading guilty. With this in mind, it is hypothesized that net of other variables in the model, offenders pleading guilty will receive less severe sanctions than comparable offenders insisting on a trial disposition. Defendant cooperation exemplified by a willingness to plead guilty is viewed, by the sentencing judge, as an indication of the defendant's willingness to "play the game" in a routine, system defined manner.

(10) *Statutory Severity (STATSEV)*. This variable is included as a control variable in the analysis. Statutory severity of the sanction is a legally relevant variable in determining sentence outcome and consistent with earlier research is expected to exert an influence on judicial sentencing behavior.

Findings

The zero order correlations reported in Table 2 indicate that, consistent with the suggested theoretical integration, black social status, financial pretrial release outcomes, weapon use, and a prior record of felony convictions are positively associated with sentence severity. Consistent with earlier research, pleading guilty is negatively associated with sentence severity. However, contrary to expectations, defendant/victim relationship and case information indicating the victim provoked the offense are unrelated to sentence severity.

Since my substantive concern is with the estimates of sentence severity, I only briefly discuss the estimates for the conviction equation (Table 3). As noted earlier, the importance of the conviction equation here is in providing estimates for the correction factor, λ , in the sentencing equation. Consistent with expectations, corroborative evidence and physical evidence significantly increase the probability of conviction; prior record of felony convictions does not produce a significant affect on this probability. Generally, the variables in the selection equation act as one would expect.

Table 4 reports a statistically marginal λ ($.10 > p > .05$) indicating that in these data, bias due to selection poses only a slight threat to obtaining unbiased estimates of the variables affecting sentence severity. Comparing the estimates in the corrected equation with those generated without correction provides a more detailed picture of the effects of selection bias. Consistent with Klepper, Nagin, and Tierney (1983), the effect of offender's race on sentence severity is underestimated for the sentencing decision in the absence of controls for sample selection (Table 4). Additionally, the effects of prior record, pleading guilty, and each of the statistically significant crime categories on sentence severity are underestimated. Finally, three of the five significant statutory severity dummy variables (Statsev4, Statsev7, and Statsev9) become nonsignificant in the uncorrected equation. Taken together, these findings are consistent with prior research (Hagan and Parker 1985; Peterson and Hagan 1984; Zatz and Hagan 1985), suggesting the desirability of controlling for sample selection bias in estimating the determinants of sentence severity.

Attention now turns to an examination of the hypotheses generated from the suggested integration of uncertainty avoidance and causal attribution in punishment perspectives. Supporting expectations and earlier research findings, prior record of felony convictions significantly increases ($b = 1.38$; $p = .01$) the severity of sentence outcome, net of other variables such as the legislatively defined maximum penalty (STATSEV) and the type of social harm of the

Table 2 • Correlation Matrix for Sentencing Equation

	Sent2	Sex	Race	Plea	Bail	Vicp2	Vicp3	Relv3	Relv2	Relv4	Weap2	Weap3	Sev2	Sev3	Sev4	Sev5	Sev6	Sev7	Sev8	Sev9	Sev10	Crm2	Crm3	Crm4	Crm5	Crm6	Crm7	Rec	
Sex	-.06																												
Race	.12	-.04																											
Plea	-.19	.03	.01																										
Bail	.23	-.05	-.02	.01																									
Vicp2	.01	.05	.02	.01	.01																								
Vicp3	.04	.05	-.01	-.02	.03	-.06																							
Relv2	.03	.03	.01	.03	.05	.10	-.12																						
Relv3	.05	-.07	.03	-.07	.01	-.05	-.26	-.41																					
Relv4	-.07	.02	-.04	.03	.04	.05	.37	-.33	-.68																				
Weap2	.19	.02	.05	-.12	.02	.10	-.18	.17	.01	-.18																			
Weap3	-.01	.01	-.03	.01	-.02	-.04	.01	-.10	-.19	.29	.38																		
Sev2	-.06	-.01	-.04	.03	.05	.01	.02	-.01	-.08	.08	-.09	.01																	
Sev3	-.06	-.01	-.01	.02	-.01	.02	-.06	.06	-.02	-.09	-.01	-.01	-.05																
Sev4	-.07	.11	-.07	.06	.02	.05	.05	-.04	-.01	.04	-.21	.05	-.05	-.11															
Sev5	.03	-.10	.10	-.10	-.01	-.04	-.06	-.08	.20	-.12	-.06	.04	-.12	.27	-.28														
Sev6	-.02	.04	.01	-.04	-.06	.11	.03	.17	-.19	.04	.33	-.04	.05	-.12	-.13	-.30													
Sev7	.05	-.03	.01	-.01	-.03	-.02	.01	.01	.05	-.05	-.09	.03	-.02	-.05	-.05	-.12	-.05												
Sev8	.11	.02	.03	.01	-.01	.08	-.01	.11	-.08	-.03	.09	-.06	-.03	-.07	-.07	-.16	-.07	-.03											
Sev9	.11	-.02	.02	-.04	.01	.06	.05	.06	-.01	-.05	.07	.05	-.03	-.07	-.08	-.18	-.08	-.03	-.04										
Sev10	.14	.01	.02	-.07	.07	-.05	.05	.05	-.02	-.03	.10	-.01	-.02	-.04	-.05	-.11	-.05	-.02	-.03	-.03									
Crm2	-.08	-.07	.03	.08	-.02	.04	-.01	-.01	-.04	.06	-.28	.06	-.06	-.14	-.15	.52	-.16	-.06	-.08	-.09	-.06								
Crm3	-.10	.05	-.07	.08	-.03	.06	.01	-.08	-.07	-.02	-.29	.01	.01	.36	.68	-.37	-.17	-.07	-.05	-.10	-.06	-.19							
Crm4	.02	-.01	-.01	-.02	-.01	.03	.02	.05	-.11	.16	.18	-.01	-.03	-.06	-.07	-.16	.53	-.03	-.04	-.04	-.03	-.08	-.08						
Crm5	.01	-.03	.02	-.03	.02	-.03	-.02	.01	.06	-.07	-.11	.03	.10	-.06	-.06	-.16	-.07	.67	-.03	-.04	-.03	-.08	-.09	-.04					
Crm6	.13	-.07	.07	-.08	.02	-.02	-.04	-.08	.24	-.17	.16	.01	-.08	-.19	-.17	.63	-.21	-.09	-.12	.01	-.08	-.25	-.26	-.11	-.11				
Crm7	.08	.10	.01	-.08	-.05	.18	.05	.28	-.14	-.12	.34	.04	-.07	.12	-.18	-.36	.45	-.08	.23	.29	.27	-.22	-.23	-.10	-.10	-.30			
Rec	.17	-.07	.12	-.02	.15	-.01	-.49	.03	.12	-.13	.15	.29	-.02	-.01	-.03	.02	-.01	-.02	.02	-.03	-.04	.02	-.01	.06	-.01	.01	-.07		

Table 3 • Probit Estimates, and Standard Errors for Variables in the Equation Predicting the Probability of Conviction

Variables		Estimates	S.E.
Crime	2	.28	.41
	3	.34	.36
	4	.14	.40
	5	-.06	.49
	6	.07	.40
Statutory Severity	7	.11	.34
	2	-.10	.50
	3	-.44	.50
	4	-.07	.51
	5	-.46	.54
Gender	6	-.49	.52
	7	-.12	.43
	8	-.67	.51
	9	-.18	.54
	10	-.30	.59
Race	2	-.19	.15
Exculpatory Evidence	2	-.27	.21
Corroborative Evidence	2	.46	.28
	3	-.24	.49
Number of Witnesses	2	.35*	.09
	3	.45	.48
Physical Evidence	2	.04	.25
Arrested at Scene	2	.31*	.09
	3	-.05	.10
Weapon	2	-.05	.10
	3	.44*	.22
Victim an Institution	2	.16	.12
	3	-.15	.13
Record	2	-.16	.13
	3	-.07	.13
Def./Victim Relationship	2	-.02	.10
	3	-.47	.26
Victim Provoked	2	-.17	.13
	3	-.30	.28
Bail	2	-.30	.28
	3	.41	.45
Scaled Deviance		1077	
D.F.		2121	

Note:

* Indicates statistical significance $p \leq .01$

offending behavior (CRIME). Both the magnitude and direction of the prior record estimate indicate that judges impose punishment consistent with administrative concerns for rational decision making in the uncertain situation of predicting the offender's future criminal behavior. The patterned responses evidenced by the statistically significant prior record effect can be understood in light of an attribution of stable and enduring offender disposition to commit future criminal activity.

According to structural organizational theory, in the face of uncertainty, judges rely on assessments made by court officials at earlier stages of case processing. In agreement with expectations, financial bail outcomes significantly increase sentence severity ($b=1.31$;

Table 4 • Unstandardized Regression Coefficients and Standard Errors for Variables in Sentence Severity Equations

Variables		Uncorrected Eq. Coefficients	S.E.	Corrected Eq. Coefficients	S.E.
Crime	2	1.88*	.72	2.05*	.83
	3	1.14*	.52	1.74*	.71
	4	2.06*	.72	2.92**	.82
	5	-.58	.63	.02	.93
	6	2.63**	.70	2.83**	.81
	7	1.33*	.57	2.10**	.70
	Statutory Severity	2	-.66	.58	-.13
3		-.96	.54	-1.26	.78
4		-.67	.57	-.95	.77
5		-1.45*	.71	-1.16	.90
6		-1.50*	.62	-1.74*	.86
7		2.86**	.78	2.81**	.78
8		1.67*	.57	1.52	.86
9		.49	.67	.06	.88
10		2.29*	.79	1.43	.97
Weapon		2	1.00***	.20	.97***
	3	.23	.23	.41	.25
Record	2	1.29***	.17	1.38***	.18
Race	2	1.18**	.31	1.31**	.34
Gender	2	-.42	.28	-.34	.31
Def./Victim Relationship	2	.29	.52	.04	.56
	3	.20	.52	.03	.23
	4	-.08	.53	-.14	.26
Victim Provoked	2	-.05	.52	.17	.54
	3	1.28**	.27	1.35**	.29
Bail	2	1.44***	.15	1.31***	.16
Plea	2	-1.36***	.18	-1.47***	.19
				4.28	2.85
Constant		-1.11	.92	-5.79	4.41
R		.20		.20	

Notes:

* Indicates coefficient significant $p < .05$ ** Indicated coefficient significant $p < .01$ *** Indicates coefficient significant $p < .0001$

$p < .001$). The bail finding suggests that an uncertainty at one point of the criminal justice system becomes salient at a subsequent decision point, namely, the sentencing stage.

As in earlier research findings, pleading guilty has a negative effect on sentence severity. Pleading guilty decreases ($b = -1.47$; $p < .001$) the severity of sanction, net of the extent of social harm, statutory severity of the offense, characteristics of defendants, and mitigating circumstances surrounding the offense (Table 4).

Focusing now on the effects of defendant characteristics, black defendants compared to white defendants receive more severe sentences ($b = 1.31$; $p < .01$; Table 4). This finding challenges earlier studies reporting a nonsignificant effect of race on sentencing, studies that have consistently failed to correct for selection bias in estimating the net effects of the variables affecting judicial discretion. Increases in sentence severity produced by the race variable support the causal attribution and uncertainty avoidance hypothesis linking black defendants with attributions of a high risk of future criminal behavior and judicial use of discretion as a means to deal with administrative concerns for reducing such risk.

Additional variables affecting sentence severity are the use of a weapon, the social harm of the offense, and two dummy variables reflecting statutory severity contrasts. Of the seven social harm contrasts, only offenses involving both potential harm to a person and potential harm to property fail to attain statistical significance. Crimes falling in these categories are primarily Burglary II offenses. This result indicates the need to control for social harm of the offense in assessing the net effect of defendant characteristics and earlier decision outcomes on sentence severity.

Of the three variables representing mitigating or aggravating circumstances, only the use of a weapon exerts a significant effect. Convicted defendants who used a weapon receive a more severe sentence ($b = .97$; $p < .01$). This finding is consistent with the suggestion that such information provides judges with a basis for attributing stable, enduring causes to the defendant which, in turn, are used to predict the likelihood of future criminal behavior. These defendants, perceived to be particularly dangerous, are likely to be stereotyped as future recidivists and are given more severe sentences than defendants who did not use a weapon.

Turning to the only legally relevant variable, statutory severity, only two of the nine severity contrasts exert a statistically significant effect ($p < .05$). A statutory severity of 10 years compared to one of 1-3 years and a \$500 fine decreases the actual severity of the sentence imposed. On the other hand, a statutory severity of 5 to 30 years compared to the reference category substantially increases the severity of the imposed penalty. Clearly, judges consider information other than statutory severity in deciding sentence outcome.

Finally, there is evidence that female offenders receive more lenient sentences than male offenders. The effect is consistent with the hypothesized direction but fails to attain statistical significance at $p < .05$.

The Effect of Race Further Examined

Lizotte (1978) reported an indirect effect of offender's race on sentence severity via the bail outcome. However, the effect of race on sentence severity may also result from an interaction with bail outcome. I further analyze the hypothesis for an interaction effect between race and the two processing variables: bail and plea. Though the effect of the interaction of the race and plea is not statistically significant, the effect of the interaction of race and bail is moderately positive and significant ($b = 1.45$; $p < .05$; Table 5). This interaction effect provides an estimate of how sentence severity responds to changes in bail outcome and offender's race, controlling for the independent variables included in the equation. To aid our understanding of the bail \times race interaction, I introduce three equations discussed in Hayduck and Wonnacutt (1980). Equation 3 is the basic regression equation with an interaction term included.

$$Y = b_1X_1 + b_2X_2 + b_3X_1X_2 + \dots + b_kX_k \quad (\text{Eq.3})$$

For purposes of illustration let X_1 represent bail outcome and X_2 represent the offender's race. Following Hayduck and Wonnacutt (1980), Eq. 4 expresses the effect of X_1 (bail outcome) on sentence severity, (Y), conditioned on X_2 (offender's race). Eq. 5 expresses the effect of X_2 (offender's race) on sentence severity, (Y), conditioned on X_1 (bail outcome).

$$Y = (b_1 + b_3X_2)X_1 + b_2X_2 + \dots + b_kX_k \quad (\text{Eq.4})$$

$$Y = b_1X_1 + (b_3X_1 + b_2)X_2 + \dots + b_kX_k \quad (\text{Eq.5})$$

Substituting the obtained regression coefficients in Eq. 3 and Eq. 5 allows us to interpret how bail outcome and offender's race interact in affecting sentence severity.

$$Y = (-.06 + 1.45 X_2)X_1 + 1.80 X_2 \quad (\text{Eq.4a})$$

$$Y = -.06X_1 + (1.45 X_1 + 1.80)X_2 \quad (\text{Eq.5a})$$

As pointed out by Hayduck and Wonnacutt (1980), the effect of bail on sentence severity

Table 5 • Unstandardized Regression Coefficients and Standard Errors for Coefficients in Sentencing Equation with Inclusion of Two Race Interaction Effects

Variables		Coefficients	S.E.
Crime	2	2.13**	.83
	3	1.72*	.70
	4	3.00**	.82
	5	.12	.93
	6	2.89**	.81
	7	2.15**	.67
Statutory Severity	2	.05	.87
	3	-1.14	.78
	4	-.85	.77
	5	-1.15	.90
	6	-1.75	.86
	7	2.55**	.78
	8	1.60	.86
	9	.07	.88
	10	1.40	.97
	Weapon	2	.97**
3		.44	.25
Record	2	1.38***	.18
Race	2	1.80*	.82
Gender	2	-.33	.31
Def./Victim Relationship	2	.06	.56
	3	.03	.23
	4	-.15	.26
Victim Provoked	2	.15	.54
	3	1.36***	.28
Bail	2	-.06	.66
Plea	2	-.14	.85
Bail × Race	2 × 2	1.45*	.67
Plea × Race	2 × 2	-1.40	.87
		4.35	2.85
Constant		-6.46	4.48
R		.20	

Notes:

* Indicates coefficient significant $p \leq .05$

** Indicated coefficient significant $p \leq .01$

*** Indicates coefficient significant $p \leq .001$

is not simply b_1 but is b_1 magnified by b_3 . Using Eq. 4a we find that the effect of having a pretrial release dependent on meeting financial conditions ($X_1 = 2$) on sentence severity, (Y), is 5.68 for black defendants ($X_2 = 2$). However, the effect of the same bail outcome ($X_1 = 2$) on sentence severity, (Y), for white defendants ($X_2 = 1$) is 2.78. The difference in the magnitude of these two effects clearly indicates that race substantially conditions the effect of bail outcome on sentence severity in the direction of disadvantaging black defendants.

Eq. 5a allows an interpretation of the effect of offender's race on sentence severity, (Y), conditioned by bail outcome. The effect of race ($X_2 = 2$) on sentence severity, (Y), when there is a financial bail outcome ($X_1 = 2$) is 9.40 and 6.50 when there is a non-financial bail outcome. The difference in magnitude of these two estimates indicates the role bail outcome plays in conditioning the effect of offender's race on sentence severity. The decision to impose

financial conditions on gaining pretrial release substantially increases the effect of race on sentence severity, resulting in more severe sentences. Table 5 indicates that the effect of bail at sentencing is mediated through race. The magnitude of the interaction effect for black defendants who enter the sentencing stage earlier defined as posing a danger to the community or a risk of failure to return for pretrial processing—a legally relevant criterion at the bail hearing in the District of Columbia—indicates that under the condition of heightened uncertainty (defined by the financial bail outcome) judges are more likely to further rely on stereotypes of black defendants being more likely to recidivate and, therefore, impose harsher sentences than for white defendants who have the same financial conditions imposed at bail.

Summary and Conclusion

The suggested theoretical integration helps us understand the consistent findings of the importance of prior record to the exercise of judicial discretion at sentencing in jurisdictions with indeterminant sentencing policies. The present findings of a strong and statistically significant effect of prior record, race, weapon use, and the pretrial release outcome further support the purposed theoretical framework. However, we must note that findings regarding the effects of defendant-victim relationship and information indicating victim provocation offer only partial support for the theoretical model since the direction of the effect, although consistent with the hypothesis, fails to achieve statistical significance.

The finding of a substantial positive interaction effect is instructive of the complex relationship between uncertainty avoidance, racial stereotypes, and levels of punishment. Using Hayduck and Wonnacutt's strategy for elaborating interactions, the data indicate that receiving a financial bail outcome results in more severe sentences for black defendants than for white defendants. With the coding used for the bail outcome, I have suggested that sentencing judges are affected by early court actors, attributing offenders as nonresponsive, an attribution that increases the uncertainty of a successful deterrent effect. The results suggest that this relationship applies more to black defendants than for white defendants. The observed interaction effect is interpreted as evidence of further support for the purposed theoretical model.

In a recent comment paper Sutton notes,

One of most intellectually unsettling lessons of sentencing research is that criminal sentences simply do not admit the kind of parsimonious and uniform predictive models we might prefer to deal with. Yet even in light of this disturbing reality about the difficulties of mapping human deliberations statistically, our understanding of the sentencing decision will be served better by conceptual and methodological strategies that accommodate rather than deny this complexity (Sutton 1987:307).

The research herein suggests a combined theoretical perspective from which to study the underlying logic of judicial decision making in an attempt to understand the complexity of imposing punishment in highly discretionary decision situations.

The theoretical perspective brought to this research does not excuse discriminatory sentencing practices, but rather it helps us to understand how racial stereotypes can be salient to decision making in the criminal justice system. Such stereotypes increase uncertainty in achieving a successful outcome, resulting in an increase in sanction severity. In other words, when judges attribute stable, enduring causes of crime to black offenders, the defendant's race affects the exercise of discretion. I suggest that it is an attribution link between race, stability of disposition to commit future criminal behavior, and uncertainty that explains the observed race effect on sentence severity. The link between attribution and attempts to avoid uncertainty provides an explanation of the effect of variables heretofore treated as legally relevant to sentencing discretion in jurisdictions using indeterminant sentencing.

Taken together the findings from this research suggest the need for further empirical exploration into how judges attempt to reduce uncertainty in sentencing. More specifically,

research should attempt to examine whether the theoretical integration is equally helpful in explaining offense specific and jurisdictional specific decisions. In addition, further research should test the usefulness of the theoretical merger in understanding guideline departures in determinate sentencing jurisdictions. Judicial noncompliance with legislative guidelines may be understood as an exercise of professional autonomy in deciding how to reduce uncertainty. If so, identifying the salient stereotypes linked to uncertainty would inform our understanding of judicial sentencing behavior. Findings herein provide some support for continued exploration of the effects of incidental selection bias on estimates of the variables affecting sentence severity. Further research should focus on both theoretical and methodological interdependence of outcomes across decision stages in the criminal justice system and continued refinement and development of the explanatory model.

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