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Does Court Workforce Racial Diversity Yield Racial Justice?  
Some Evidence from Federal Court Contexts

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Does Workforce Diversity Yield Racial Justice? Some Evidence from Federal Court Contexts

ABSTRACT

Increasing racial and ethnic group representation in criminal justice-related occupations is considered a potential remedy to real and perceived inequality in justice administration, including disparities in sentencing. Studies of diversity in the federal judiciary yield contradictory findings regarding the degree to which race and other status characteristics affect judicial orientations and decisions. While no studies simultaneously consider racial group representation among judicial and non-judicial court actors, following theoretical and empirical court community literature, we argue this more inclusive “workgroup” may be the appropriate unit of analysis in assessing the substantive significance of diversity in justice administration. Combining court organizational, contextual and sentencing data for 90 federal districts we use Hierarchical Linear Modeling to analyze how variable levels of workgroup diversity relate to district-level differences in sentencing, and racial disparities in sentence severity. Using district-specific indices of population and workgroup dissimilarity to define “representation,” we find that districts with greater Black representation among decision makers are distinguished by their greater likelihood of incarceration for all defendants, but more racially equitable odds of incarceration for Black and white defendants, compared to districts with less Black representation. Our findings suggest the importance of operationalizing diversity as a group rather than individual-level characteristic, and that racial justice may be moderately advanced by racial diversity in federal court workgroups.

Keywords: Race and sentencing, court community, workgroup diversity

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BACKGROUND

Disparity in justice outcomes is a pressing criminological and public policy concern. Over a decade of research on federal sentencing has shown that disparities in sentence outcomes based on defendant characteristics such as race, gender and class persist under guideline sentencing. Though research confirms that legally relevant variables account for much of the variation in sentencing, there is evidence that social organizational processes are relevant to disparities in sentence outcomes. In the federal context, for example, differences in the application of sentencing guidelines across courts, particularly in the use of guideline departures, is believed to explain much of the persistent disparity in sentence severity based on defendant characteristics (Kautt 2002; Johnson 2005).

Important questions remain about the specific court contextual, organizational and processual factors which produce and potentially mitigate racially disparate sentencing outcomes. This paper asks whether and how racial diversity among key decision makers in federal courts relates to sentencing in federal criminal cases, and racial disparity in these sentence outcomes.

We situate our analysis of the court contextual significance of decision-maker racial diversity in several currents of existing theoretical, empirical and policy debate on sentencing disparity. First, we argue that theoretical and empirical research on the cultures of “court communities” suggests the need for more sociological perspective on the politics of racial difference (i.e., diversity) within court organizations, and its relevance to processual orders, including sentencing decisions. Whereas prior research has typically modeled diversity as a characteristic of individual actors, we consider whether and how court organizational differences in racial group representation, that is, the aggregate racial composition of key decision-making groups, relates to sentencing outcomes generally, and racial disparity in sentencing in particular. The inconsistent and contradictory conclusions of prior research on decision-maker diversity and decision outcomes may stem in part from failure to
consider salient sociological dynamics mediating individual decision-maker racial identity and organizational behavior, namely, the culture or organization of diversity.

Research and policy specifically related to disparity in sentencing also encourages closer consideration of group-dynamics of racial diversity in studies of sentence outcomes, informing our approach. On one hand, racial “group threat” theories imply and sometimes assert that the absence of racial diversity in key decision-making positions facilitates racial inequality in the administration of justice. While these discussions typically focus on the nature and extent of “threat” (i.e., minority demographic presence, and/or economic and political competition), they also assume that whites dominate deliberative milieus of criminal social control (esp., police, prisons, courts and legislatures). Perceptions of group threat do not yield discriminatory processes and outcomes absent this imbalance of power or influence. This exclusivity of authority is thought to facilitate the enlistment of criminal justice systems in strategies of oppression and domination, for example, through systematic “under-protection” of minority rights and interests, or criminal justice surveillance and sanctions which selectively “over-enforce” law (Ulmer & Johnson 2004; Behrens et al. 2003; Crawford et al. 1998; Chiricos et al. 1997; Kennedy 1997). However, scholarship to date on the “group threat” thesis has failed to take contextual variation in racial and ethnic group agency into account, overlooking these salient dynamics of racial and ethnic group conflict, power and control.

Presumably, variable racial and ethnic group representation among arbiters of justice would mediate the nature and extent of these racial “group threat” dynamics, including the realization of racial justice in contexts of pluralism. Indeed, in response to long-standing concerns about racial disparities in justice administration, community and governmental entities have expressly called for more diversity in the justice workforce (Dulaney 1996; Ward 2006). Calls for increasing diversity among criminal justice decision makers often suggest this will symbolically and substantively enhance the quality and legitimacy of justice administration, in part by infusing the interests,
sensibilities, and skill sets of a more representative cross-section of society (U.S. Department of
Justice 2003). However, there has been little effort and progress at determining what constitutes a
“representative” justice workforce, or what forms and degrees of work group diversity yield specific
symbolic and substantive benefits.

In sum, various theoretical and policy perspectives suggest that greater racial and ethnic
group parity in sentencing and other criminal justice outcomes may obtain where power and
influence in criminal social control is more equitably and broadly distributed among racial and ethnic
groups. However, there has been little specific attention to these differential power relations (i.e., in
“group threat” research), or progress specifying the quality of representation necessary to achieving
greater equity or fairness in justice administration. By taking both population and justice workforce
diversity into account in measures of racial group “representation” within federal courtroom
workgroups, and analyzing sentencing in these settings, our paper seeks to test more closely whether
variably racially representative federal court organizations sentence differently, and more or less racially
equitably. Our analyses consider racial diversity of judges, prosecutors and judicial and prosecutorial
diversity combined, in relation to both district-level population racial characteristics, and racial
differences among defendants, in ninety of the ninety-four federal districts. By modeling race-
effects at the multiple and potentially interactive analytic levels, the paper seeks to more thoroughly
assess the contextual significance of race to criminal sentencing in federal court communities.

RACIAL DISPARITIES IN FEDERAL SENTENCING

Structured sentencing systems such as federal and state sentencing guidelines were
implemented to create certainty in sentencing outcomes, eliminate unwarranted disparity, and
otherwise increase the transparency and legitimacy of sentencing processes (Stith & Cabranes 1998).
Evidence of disparate sentencing outcomes, particularly with regard to defendant race and gender,
persists under guideline sentencing. A number of recent efforts to control judicial discretion have
revitalized debate about discretionary decision-making under guidelines. In 2003 the U.S. Congress narrowed the range of options judges have for granting departures from the guidelines through passage of the Feeney Amendment (Title IV of S. 151, Public law 108-21). Strict rules of adherence to the guidelines based in the Feeney Amendment were weakened a few years later when the Supreme Court held that judicial decisions to enhance sentences through upward departures violate the Sixth Amendment. The court subsequently made the sentencing guidelines advisory rather than mandatory (United States v. Booker 2005). With stakeholders beginning to consider revised guideline models, it is an opportune moment to examine the organization of decision-making in federal courtroom workgroups, prior to the Booker decision.\footnote{The courtroom workgroup refers to the formal and informal relationships of interdependence and norms established between court personnel (judges, lawyers, court administrators) in the course of processing cases. (Eisenstein & Jacob 1974).}

Since the adoption of sentencing guidelines, scholars have used various methods to examine how defendant characteristics versus offense-related variables explain the existence of sentencing disparity under presumptive sentencing systems (Miethe & Moore 1985; Dixon 1995; Albonetti 1997; Ulmer 1997; Albonetti 1998; Kautt & Spohn 2002). This research confirms that some defendant characteristics such as race and gender are related to sentence severity. Women continue to receive more lenient sentences than men, in part because they disproportionately benefit from downward departure processes built into most guideline systems (Kramer & Ulmer 1996; Albonetti 1998). While findings related to racial disparities in sentencing outcomes under the guidelines are more mixed, numerous studies conclude that non-white defendants receive longer sentences than white defendants, controlling for potentially relevant factors (Albonetti 1997; Steffensmeier & Demuth 2000; Mustard 2001). This disparity appears to rest largely in the use of downward departures, plea bargaining processes and mandatory minimum sentencing (Nagel & Schulhofer 1992; Everett & Wojkiewicz 2002; Kautt & Spohn 2002; Engen et al. 2003; Farrell 2004). Variation
across federal districts in the application of the guidelines (both before and after Booker) suggests that features of the district itself may be important for understanding sentencing outcomes (Hoefer 2007). Recent theoretical and empirical research on court organization offers useful insight into potential underlying mechanisms of federal sentencing disparity.

*Race & the Court Community*

Current sentencing research emphasizes that local legal and organizational cultures of specific courts influence outlooks and decision-making routines of court workers and workgroups, thus shaping case processing outcomes (Eisenstein et al. 1988; Stapleton, Aday & Ito 1982; Ulmer & Kramer 1996, 1998; Ulmer 1997; Ulmer & Johnson 2004; Dixon 1995). The “court community” concept has been used to characterize these social organizational dimensions of decision making (Eisenstein et al. 1988; Ulmer & Kramer 1998; Ulmer 1995). The framework draws on classic Weberian insights on organizations and more recent “processual order” theory (or negotiated order theory) to conceptualize how court workers articulate organizational influences in decision-making routines (Weber 1954). As Fischer and Dirsmith (1995) explain, the concept of processual order, “facilitates the examination of how [workers] organize themselves in the face of others attempting to organize them along different lines, all set against the backdrop of broader societal-structural contexts within which they are situated” (386).

Conceptualizing courts as “social worlds, or communities of action and communication” (Ulmer 1995: 589), the court community framework draws attention to the “localized, diverse processual orders in which case processing and sentencing practices develop through the ongoing interaction of courtroom workgroup members” (Ulmer & Kramer 1998: 251; also see Johnson 2006; Kramer & Ulmer 2002; Dixon 1995; Einstein and Jacob 1977; Cicourel 1968; Sudnow 1965; Emerson 1969). Courtroom workgroup interaction is presumably contingent on a wide-range of factors prevailing in specific contexts such as the relationships and attitudes of workers,
characteristics of local population and institutions, the prevailing organizational norms, fiscal and institutional constraints, formal law and public policy bearing upon court actors. Studies vary significantly in their interpretation of which factors are most relevant to processual orders and outcomes, including racial and gender-based sentencing disparities, but they consistently underscore the necessity of including organizational context controls in analyses of case processing (Fearn 2005; Ulmer & Johnson 2004; Dixon 1995).

Since court actor’s orientations and court actions are conditioned by factors specific to dynamic court organizations, it is expected that processual orders will vary across courts, and that the relevance of court contextual factors to case processing may also vary organizationally and temporally (Ulmer & Johnson 2004). The court organizational perspective seems particularly helpful to understanding court contexts where levels and forms of decision maker participation are modified or constrained by social change. Efforts to diversify the ranks of court authorities and to regulate decision-making through presumptive sentencing structures limiting judicial discretion represent two overlapping and potentially contradictory policy changes affecting courtroom workgroups in the period under investigation. Our analyses focus on whether federal court workgroup racial diversity, specifically among judges and prosecutors, is an important district-level court organizational predictor of criminal sentencing outcomes, and racial disparity in sentencing.

There is considerable evidence that non-white defendants receive longer sentences than white defendants, controlling for potentially relevant legal factors (Steffensmeier & Demuth 2000; Mustard 2001), and that court contextual factors mediate and moderate the race-effect on criminal sentencing in contemporary court communities (for reviews, see Walker, Spohn & Delone 2004; Zatz 1987). While most of the race and sentencing research focuses on state and county (esp.

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3 There is a potential contradiction between the “multiculturalism” motive of workgroup diversification and the “standardizing” effect of presumptive or guideline sentencing, in so far as this structured decision-making limits the possibility and terms of multicultural influence.
juvenile) courts, there is also significant evidence of racialized sentencing patterns in federal court contexts. While reducing differences in sentencing processes and decisions within and across federal courts was a primary motivation for the adoption of federal sentencing guidelines, there is evidence that disparity persists under guidelines, in part through their differential application. Departures from the sentencing guidelines provide legally permissible avenues for judges and other court actors to deviate from rigid procriptions of the guidelines, leading to rates of downward departure from the guidelines which vary widely across judicial districts, due in part to appellate decisions in federal circuits which uniquely regulate judicial discretion (Kautt 2002). Further, limited research on federal sentencing posits that differences in court organization at the district or circuit level may affect sentencing outcomes (Kautt 2002). Evidence of persistent disparity and contextual variation in the generally more regulated federal context suggests the continued importance of a court community perspective in federal sentencing research. We model the “social world” of federal sentencing by considering several court and community contextual factors prior research routinely suggests may influence the processual order of decision-making, and by considering court and community characteristics which are often overlooked.

Our main interest and contribution in this research is modeling race relations in federal court organizations to advance understanding of “racialized” sentence outcomes generally, and racial parity in sentencing especially. Our approach specifically integrates the related claims of “racial group threat” theory and “value of diversity” discourse and policy to consider this relationship between race, court organization and outcomes. While these have not yet been closely considered together, their overlap suggests the need for a multi-level perspective on race and sentencing, which not only accounts for differences in group outcomes, or between individual decision-makers, but differential power relations in contexts of criminal sentencing.

*Racial Group Threat*
Theories of “racial group threat” (Bobo and Hutchings 1996; Blumer 1958) have been useful to interpreting apparent race-effects on popular and official orientations towards criminal social control (Ulmer & Johnson 2004; Behrens et al. 2003; Crawford et al. 1998; Chiricos et al. 1997). The racial threat perspective generally theorizes that non-white criminal defendants are disadvantaged through the racialization of popular crime fears, and corresponding perceptions of criminal tendency, culpability and appropriate punishments. Although issues of crime and fear of crime, according to these theories, are somewhat symbolic reflections of other political, economic and social anxieties (i.e., opposition to affirmative action, residential integration, etc.), these politics of racial conflict become tangibly reflected within institutions of law and criminal social control. Socially and legally constructed as representatives of criminal problem populations, it is argued, minority criminal defendants come to be regarded as distinct “threats” to social order, deserving more severe and exclusionary law enforcement and legal sanctions.

The racial group threat thesis suggests that an association of crime with “racial threat” enlists criminal justice systems as regulatory institutions of societal race relations, with law enforcement and legal sanctions being organized to protect dominant racial group interests. The size of the minority population is expected to positively predict severity in sentencing, especially where majority populations experience socio-economic marginalization or decline. The presence of racial minorities in these contexts, it is argued, conditions general community and local court orientations towards the “crime problem” and its appropriate response. An individual defendant’s minority racial status is expected to interact with minority population concentration to influence sentencing outcomes, intensifying sentencing severity in cases involving “one of them.”

Theories of racial group threat generally suggest race will have cross-level interactive effects on criminal case outcomes (Ulmer & Johnson 2004). To empirically test this relationship, several studies consider the contextual significance of demographic factors, especially minority population
concentration and the relative socio-economic standing of racial and ethnic groups, to sentencing outcomes generally, and the sentencing of minorities specifically. While some find little or no evidence to support the racial group threat thesis (Kautt 2002; Britt 2000; Ulmer 1997), others find that minority concentration indeed relates positively to severity of court sanctions (Kramer & Ulmer 1996; Bridges et al. 1995; Kramer & Steffensmeier 1993; Feld 1991; Myers & Talarico 1987), interacting with defendant racial status to predict greater disparity in sentencing (Ulmer & Johnson 2004; Bridges & Crutchfield 1988; Crawford et al. 1998) and other formal legal sanctions (Behrens et al. 2003).

Central to the logic of the racial group threat thesis is the expectation that majority groups control deliberative milieus of justice administration (i.e., legislative, police and court organizations), however, this control varies across time and place in ways which research must take into account. It is widely the case, as Ulmer and Johnson (2004: 145) point out, that “dominant [court] actors (judges, prosecutors) are white in the contemporary United States,” however, over the past several decades, a far more racially heterogeneous cast has emerged in the ranks of these decision makers, at least in select jurisdictions. In our analysis of 90 federal districts, the percentage of judges and prosecutors in a district who are white varies from lows of 57 and 37 percent, respectively, to highs of 100 percent. On average, more than eighty percent of judges and prosecutors in a district are white (see Table 1).

Racial group representation in decision-making seems a potentially vital question of agency related to group threat, indeed, a contextual factor distinguishing how race orders social control. As the “value of diversity” perspective similarly asserts, as we discuss further below, it is possible that more diverse or representative occupational groups (legislators, judges and prosecutors) mediate dynamics of threat, and the racialization of control. There is some evidence, for example, that police compliance with hate crime reporting laws is greater in cities with Black mayors (King 2007), and
that the relationship between Black population size and use of the death penalty is similarly mediated by Black political power (Jacobs & Carmicheal 2002). In terms of criminal sentencing, the degree to which and how nonwhite population concentration and crime is held to constitute a threat, and the significance of defendant race and race of offender and victim relationships to charging and sentencing, for example, may be contingent on the composition of authorities shaping sanctioning policies, routines, and decisions. It generally remains unclear, however, whether if at all, under what circumstances, and specifically how racial and ethnic group agency in criminal justice processes affects the racialization of social control

The Value of Decision-Maker Diversity

The significance of courtroom workgroup diversity has received limited attention in race and sentencing research, notwithstanding prevalent assumptions regarding its symbolic and substantive significance, and the potential value of this research to resolving persisting inequality. Not unlike the rationale for sentencing guidelines, promoting ethnoracial diversity among court and other justice officials has been considered a possible remedy to real and perceived racial inequality in justice administration (See Ward 2006; Pope & Lovell 2000; Welch et al. 1988; Irwin 1980; Kerner Commission 1968). Commemorative statements of the Just a Beginning Foundation, an association of federal minority lawyers and judges founded in 1992, indicates the general thrust of these expected benefits. The Foundation asserts that:

“The integration of the federal judiciary is a significant achievement for social equality and the law. As a result of the determination of pioneering people of color, some descendants of slaves and other disenfranchised persons now serve as arbiters of a legal system that had once denied their ancestors fundamental legal rights to life, liberty, and property…These judges and the opinions that they have rendered have become an indelible part of American law. Although the future representation of African-Americans in the federal judiciary is uncertain, the accomplishments of past and present African-American federal judges are undeniably clear.”

(http://www.jtbf.org/)
Citing the late Justice Thurgood Marshall, the Foundation adds that, "African-American lawyers have played a unique role in American history. Imbued with respect for the rule of law and the responsibility that such belief engenders, these lawyers have used their legal training not only to be masterful technicians but to force the legal system to live up to its creed: the promise of equal justice under law" (http://www.jtbf.org/).

Minority justice professionals are not alone in claiming that workforce diversity is symbolically and substantively beneficial to justice administration. A recent U.S. Justice Department initiative to increase diversity among U.S. Attorneys asserts that, “Our pursuit of justice is stronger, and fulfillment of our national mission more effective, when we bring to bear the experience, judgment, and energy of colleagues from a wide spectrum of racial, ethnic, economic, and geographic backgrounds” (U.S. Department of Justice 2003). Research and policy focused on criminal justice and other public and private sectors also theorizes that active representation in decisionmaking results in more substantively fair and symbolically legitimate processes, including more equitable outcomes (see Thomas and Ely 2001; Young 1990; Krislov 1974).

These expectation of substantive and symbolic benefits of diversity raise empirical questions which await more systematic scrutiny (Ward 2006). To be sure, several studies consider ethnoracial group diversity in justice administration, focusing on the attitudes and behaviors of prison workers, police and judges in particular. Research on racial differences in professional orientation often finds that status characteristics of justice workers (including race) hold limited significance in comparison to occupational roles, political ideology, and professional goals (Jacobs and Cohen 1978; Crouch & Alpert 1982; Raganella & White 2004), yet others report that minorities do bring distinct perspectives to bear on the idea and practice of justice (Smith 1983; Bennett & Johnson 2000; Cullen et al. 1989; Jurik 1985).
Research is less extensive and similarly inconclusive on consequences of decisionmaker diversity for justice processes and outcomes. Again, several studies find no substantial race-of-decisionmaker affect on substantive outcomes (Mastrofski et al. 2002; Walker & Barrow 1985; Spohn 1990a & 1990b; Uhlman 1978, 1979), while others report marginal or more substantial affects (Luna-Firebaugh 2003; Weitzer 2000; Dulaney 1996). Studies of judicial diversity illustrate the limited and inconsistent picture of the relationship between decision-maker racial diversity, professional orientations and case outcomes. Some studies report that minority judges do not treat defendants differently than white judges (Spohn 1990b; Walker & Barrow 1985), and that minority and white judges both sentence minority defendants more severely than white defendants (Spohn 1990b). Others studies do find race-linked judicial decisionmaking differences, such as evidence that non-white judges sentence non-white defendants more leniently than white defendants (Welch et al. 1988), sentence non-white defendants more harshly than white defendants (Steffensmeier & Britt 2001), and sentence all defendants more consistently than white judges (Holmes et al. 1993). Some find that non-white judges generally favor the defense at higher rates than white judges (Gottschall, 1983), and are uniquely responsive to defendant claims of procedural impropriety, such as police misconduct (Scherer 2004). As Scherer (2004) and others stress, the inconsistency of these findings may in part reflect limitations in the conceptualization and measurement of the court contextual significance of decision maker racial diversity.

Beyond Diversity: Contextualizing Workgroup Representation

Court community scholars suggest that contextual and background characteristics of courts and court workers, respectively, may influence the culture and norms of courtroom workgroups as a whole, thus shaping the “focal concerns” or “substantive rationalities” evident in deliberations and outcomes in criminal cases. Group dynamics seem likely to condition the symbolic and substance significance of racial diversity among court decision-makers, including its relation to court norms,
behaviors, and outcomes. While there is virtually no research examining the contextual nature of race relations among authorities rather than subjects of criminal justice, there has been much discussion of these group relations. We model racial group representation in the context of federal court communities to address two specific limitations in the extant empirical research.

First, most sentencing research taking decision maker diversity into account only examines the attitudes and behaviors of individual actors from different racial groups, to discern the relevance of race within the justice workforce. Virtually all of these neglect to consider wider racial and ethnic group dynamics of these decision-making milieus, including the question of majority and minority group composition of the workforce overall, distributions across positions of variable influence, or the representative quality of diversity in the court, compared to the population. A partial exception, and illustrative example, is a recent study by Schanzenbach (2005) of aggregate levels of judge racial diversity and district-level racial differences in sentencing outcomes. This study suggests that the proportion of judges in a district who are Black, Hispanic or female has little direct effect on sentences in general, but does affect racial and gender disparities in sentence outcomes, particularly for less serious offenses. While the analysis provides a valuably more nuanced understanding of how race and gender diversity may affect group dynamics in sentencing, workgroup diversity is measured merely as the proportional representation of Blacks within a single decision-making group in each district (e.g. percent of judges who are Black), without reference to other decision-making groups, or how judicial diversity relates to the racial demographics of the district.

Some have suggested that a “tokenism” effect helps account for findings that Black judges are rather indistinct in sentencing behavior, and in some cases even more severe in sentencing Black defendants (Steffensmeier and Britt, 2001). Non-white court officials representing the single or one-of-few non-white actor(s) within a particular court role, or court organization, may feel distinctly obligated to demonstrate allegiance to norms of courtroom workgroups. In the case of judges, this
might mean sentencing similarly to the large white majority, or even sentencing more harshly, even or especially in cases with non-white defendants. Schanzenbach (2005) suggests that Black judges, even when a large proportion of the judiciary, may actually form racial biases like and unlike those of white peers. Noting moderate effects of proportion of minority judges on sentence outcomes for minority defendants, he and others speculate that Black decisionmakers may have greater sympathy for Black crime victims, leading them to impose stricter sentences on Black defendants, like white counterparts but for different reasons. The scenario usefully twist the common logics of racial group threat and “value of diversity” perspectives, by reframing the constructed meaning and boundaries of Black community interests in criminal social control. Whether for tokenism, or Black elite influence among arbiters of justice, they suggest, these actors could become instrumental in the culture or practice of racially-differential sanctioning of Black defendants, whether to conform to court norms, or for their actual construction as within-group threats to “legitimate” Black group interests. Understanding these court community dynamics awaits careful analysis of racial and ethnic group demographic, identity, and power relations. Our analysis takes the modest but useful step of considering workgroup diversity in relation to both population and defendant racial characteristics.

The second contribution of our model of representation is the inclusion of multiple decision-making groups. Research on diversity among court actors has neglected to consider levels of diversity among multiple categories of actors involved in shaping the processual orders and outcomes of courts. Beyond members of the federal judiciary, for example, federal prosecutors represent a group of court professionals whose attitudes and decisions have a substantial effect on sentence outcomes. Under systems of structured sentencing such as guidelines and mandatory minimums discretion does not disappear, but rather shifts to other actors, primarily prosecutors (Meithe 1987; Savelsberg 1992; Engen & Steen 2000; Bjerk 2005). While some scholars consider factors affecting prosecutorial discretion (LaFave 1970; Misner 1996; Miller & Eisenstein 2005), no
study we have found examines the significance of diversity among prosecutors to criminal case outcomes, or the diversity of both prosecutors in judges. While our analysis considers sentencing of variously diverse prosecutorial and judicial workgroups under strict guideline sentencing, it will be interesting and important to consider sentencing since recent reforms.

Given the established importance of workgroups to decision making in specific courts, and differences between courts, decision making groups seem to be the appropriate unit of analysis for assessing the substantive significance of diversity in criminal justice administration. Moreover, neglecting group-dynamics of race and representation may limit understanding of the salient sociological dynamics, and influence, of courtroom workgroup diversity. We analyze race and representation in federal sentencing in several ways. By comparing and aggregating measures of race and representation among judges and prosecutors, and relating these to demographic characteristics, we consider racial group representation within the Federal Court, limiting our definition to statistical parity, and focusing on Black Americans. We lack data on district-level differences in individual decision-maker attitudes or behavior, and therefore only consider the distributive balance of key categories of workers, and its relation if any to sentencing. We consider the possible influence of diversity on sentencing separately for defendants overall, and Black defendants in particular. Following the mixed and limited evidence of race-based differences in professional orientation, and given the highly structured nature of federal sentencing, we find no reason to expect that sentencing severity will generally differ across federal districts, depending upon workgroup diversity. Rather, we expect this relationship to be more salient in the case of sentencing disparity, as both “group threat” and “value of diversity” perspectives suggest.

Therefore, we arrive at our first set of hypotheses regarding the general district-level significance of racial diversity in federal court workgroups:
Hypothesis 1: Black representation among judges is unrelated to sentence severity.

Hypothesis 2: Black representation among prosecutors is unrelated to sentence severity.

Hypothesis 3: Black representation among judges and prosecutors, collectively, is unrelated to sentence severity.

Our remaining hypotheses consider the district-level significance of Black representation among judges and prosecutors to racial disparity in federal sentencing. Our primary question here is how Black defendants fare in sentencing within districts distinguished by variable levels of Black representation in the workgroup, while controlling for relevant individual and contextual factors, including minority concentration in the district. We draw on two specific streams of academic and policy debate on race and sentencing to inform this aspect of our analysis. As noted, racial group threat research asserts and more often implies that the lack of nonwhite representation among decision makers facilitates the enlistment of criminal justice systems (i.e., police and court organizations) in certain kind of racialized criminal social control, hostile to the interests of nonwhites (Ulmer & Johnson 2004). Similarly, arguments for the diversification of justice-related occupations often contend this will help promote substantive equality and symbolic legitimacy in justice administration. In particular, it is the diminished social distance between these actors and disproportionately minority defendants, or their greater sensitivity to issues of fairness and equality, which is expected to improve the quality of justice administration generally, and benefit nonwhite stakeholders particularly (Ward, 2006). As we have seen, however, others have suggested that workgroup racial diversity may have a very limited impact upon, further undermine, or complicate the very meaning of racial justice and equality (Steffensmeier and Britt, 2001; Schanzenbach, 2005).

Whatever the direction of its influence on the sentencing of Black defendants, the essential claim of both the “group threat” and “value of diversity” perspectives is that variation in criminal justice power relations is meaningful, as group interests in justice outcomes are concerned. Since it is
most often assumed that more equitable racial and ethnic group representation will benefit these
groups, and widely-held that Black Americans are subject to at least somewhat unwarranted severe
sentencing, we hypothesize that greater Black representation among decision-makers will correspond
with less severe sentencing of Black defendants. We thus arrive at our final research hypotheses.

Hypothesis 4: Black defendants are sentenced more severely in districts with less Black representation among
judges.

Hypothesis 5: Black defendants are sentenced more severely in districts with less Black representation among
prosecutors.

Hypothesis 6: Black defendants are sentenced more severely in districts with less Black representation among
judges and prosecutors collectively.

RESEARCH DESIGN AND METHODS

The relationship between judge and prosecutor diversity and case processing is likely
mediated and moderated by other contextual characteristics of court organizations. Our research is
designed to measure and analyze these complex and interactive social, organizational, and individual-
level variables using a series of multilevel models. Hierarchical statistical models allow us to examine
the relationship between courtroom workgroup diversity and case outcomes, measured here by the
severity of criminal sentences, net of other case and court organizational characteristics. This design
allows us to examine the relationship between workgroup diversity and sentencing outcomes. To
identify possible effects of workgroup diversity we examine how 1) individual defendant
characteristics, 2) the social context and organizational composition of the courts, and 3) the level of
racial and gender representation among judges and prosecutors in each district court relate to
district-level differences in sentencing severity and disparity. Consistent with other research, we
conceptualize sentencing as two decisions: 1) the decision to incarcerate and 2) the length of sentence imposed. Each hypothesis related to sentence severity and racial disparity in sentence severity is considered separately in relation to each of these decisions.

Multiple databases are combined to allow us to test the effect of courtroom workgroup diversity on sentence severity in each district while controlling for other district court level variables. Individual defendant case decisions were obtained through the Monitoring Federal Criminal Sentencing (MFCS) data acquired from the United States Sentencing Commission which includes information on all federal cases sentenced between October 1, 2000 and September 30, 2002. The MFCS data contain detailed information on individual case-level factors such as offender characteristics, offense severity, criminal history background, other relevant guidelines and court processing information as well as the dependent variable, sentence outcome. Since we are interested in examining the specific effect of Black workgroup representation on the sentencing of Black defendants we have limited the federal sentencing data in the present analysis to include only Black and white sentences (N=52,247).

The second level data include information about the social context, court context and diversity of the courtroom workgroup for 90 federal judicial districts. Information on the social context of the judicial district was compiled using information from the 2000 census and the 2000 Uniform Crime Reports (available through the Fed-Stats system). Information specific to the court context including data on case processing, court workload information, demographics of each

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4 Originally, we anticipated analyzing sentencing outcomes for Black defendants compared to non-Black defendants. However, research suggesting Hispanic defendants receive more severe sentences than white defendants under the federal system lead us to rethink use of a Black/non-Black categorization (Steffensmier & Demuth 2000). To simplify the comparisons between the experiences of Black and white defendants we have excluded Hispanic, Asian and other race defendants from the present analysis.

5 The federal court system is broken in 94 judicial districts. Ninety of these districts were examined in this study. Four districts (Puerto Rico, Virgin Islands, Guam and North Mariana Island) were eliminated due to insufficient data available and concern about variation in territorial governance over judicial processes (see Kautt 2002).
district, arrest data for each district, caseload, criminal case processing time, and proportion of
district caseload for different types of crimes was obtained through the Federal Court Management
Statistics and Business of the United States Court 2000-2001 which is compiled annually by the
Administrative Office of the U.S. Courts.

Finally, information on the diversity of judges and prosecutors was collected by the authors
for each federal judicial district. Information on the demographics of judges for each district was
compiled using publicly available data on judge race and gender found at the Federal Judicial
Center’s Biographical Director of Federal Justice (http://www.fjc.gov). Using this Directory we
built a database which includes information on the race, gender, date of appointment, date of
termination, nominating party, and court type for all federal judges serving in each federal judicial
district between 2000 and 2001. Information on the race and gender of federal prosecutors
(including U.S. Attorneys and Assistant U.S. Attorneys) for each federal judicial district in 2000 and
2001 was provided to the authors upon request to Fed-Stats.

Dependent Variables

Our dependent variable is severity in sentence decision. The literature on sentencing has
conceptualized sentence outcomes in a variety of ways. The decision to incarcerate a convicted
offender or grant probation and the length of the term of incarceration are the two most commonly
examined outcomes. It is also possible to analyze the issuance of departures as a potential outcome
variable (see Johnson 2003; Johnson 2005) or to explore specific categories of departures (see
Farrell, 2004). We define sentence severity according to incarceration versus non-incarceration
sentences, and length of incarceration, using the following outcome measures: 1) whether or not a
defendant receives a prison sentence; and, 2) the length of the sentence imposed.\(^6\) In logistic

\(^6\) There is some disagreement in the literature about whether sentencing decisions should be modeled in one
or two stages. Some research suggests judge and court level processes exert different effects on the decision
to incarcerate and the length of incarceration (Spohn 1990b) while others suggest separating the decision to
analysis, imprisonment decision is determined through use of a dichotomous dependent variable indicating whether or not a prison sentence was received (coded 1 if the offender was sentenced to any length of confinement 1 month or over in a federal prison and 0 if he/she was sentenced to any non-incarceration option such as house arrest, probation or a fine or a length of confinement less than 1 month). For those offenders sentenced to a term of incarceration of 1 month or over linear analysis is conducted to examine sentence length. The natural log of the sentence length in months was calculated to compensate for the positively skewed nature of sentencing length data.

*Individual Level Variables*

To assess the impact of court contexts and workgroup diversity on sentence severity it is important to control for theoretically relevant case-level factors. Since HLM requires a higher level of specificity in model construction an OLS regression was initially conducted on the case-level data to determine the theoretically relevant variables which should be included in the HLM models. The specific individual level defendant characteristics used here include defendant characteristics such as race (whether a defendant is Black or white), gender, citizenship (whether defendant is a United States citizen or not), age, and education (whether or not defendant has a high school diploma or greater). Additionally, guideline relevant factors including criminal history, offense level, the presumptive sentence (measured as the guideline midpoint), and whether or not a downward departure was granted were included. Offense information included whether the primary offense was a violent, drug, property, or other (e.g. immigration, administration of justice, environmental) type of crime and whether a mandatory minimum was applied. A measure of courtroom process identifying whether the defendant received a plea agreement or went to trial was included in the
model. In addition, since approximately 21 percent of the offenders received a non-incarceration sentence there is some concern about sample-selection bias. A hazard rate is included in the hierarchical models examining sentence length to help correct for potential selection bias into incarceration (Berk 1983; Heckman 1976). It is important to note, 8.5 percent of the total cases with missing data were deleted listwise from the final level-one data set prior to HLM analysis. All level 1 variables were centered around the group mean to test for effects of case and offender characteristics net of any effects unique to being sentenced in the same district.

Judicial District Context Variables

District and workgroup characteristics were examined utilizing hierarchical models. In this analysis we are primarily interested in the effect of racial diversity of courtroom workgroups on sentence outcomes. Federal sentencing data do not presently include case-level information on participating courtroom workgroup members which would allow researchers to examine the individual effect of diversity on specific case outcomes. Since we are most interested in measuring the significance of workgroup diversity to case outcomes we use measures of racial and gender representation for two groups of courtroom actors in each district: judges and prosecutors. In this analysis representation is conceptualized as the proportional relationship of Black judges, Black

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7 This variable was calculated using the Heckman two-step command in Stata 8.2. Recent research by Buashway et al. (2007) has raised questions about the appropriate use of hazard rates to correct for selection bias in two step models. The authors suggest use of an exclusion variable that theoretically would predict incarceration but conversely would not predict sentence length. Because such a variable does not appear to exist in the federal sentencing data we have chosen to run both traditional two-step models without a hazard rate and two-step models including the hazard rate. While the strengths of the coefficients and significance levels were similar for the two types of models, we report the models with hazard rates here as a more conservative measure of the effect of workgroup representation on sentence outcomes.

8 T-tests for independent samples indicated no significant differences in either incarceration or sentence length for the cases excluded due to missing data and the cases included in the final analysis.

9 Centering on the district mean is an appropriate method for estimating offender-level effects because it standardizes the distributions of the independent variables across the districts used in the analysis (for more information on centering see Bryk & Raudenbush 1992: 25-28).
prosecutors and a combined measure of Black judges and prosecutors in a district compared to the Black population of the district.\textsuperscript{10}

Use of information on the characteristics of both judges and prosecutors provides significant advantages over previous research which has generally focused on single sets of actors, usually judges (Johnson 2006; Scherer 2004, Schanzenbach 2005). Additionally measuring judge and prosecutor racial representation in each district provides a more appropriate test of racial threat theories than individual measures of judge race or group measures of judge race operationalized simply as the proportion of non-white judges in each district. In this analysis we are able to compare effects of Black representation among judges and prosecutors. As discussed above, the potential displacement of discretion from judges to prosecutors under structured sentencing necessitates attention to the potential independent effects of diversity among judges and prosecutors. Our ability to measure the combined effect of judicial and prosecutorial diversity further enhances our understanding of the court contextual significance of workgroup diversity. Black representation among the workgroup is measured here as the average proportion of Black judges and Black prosecutors in a district divided by the proportion of the population Black in the district.\textsuperscript{11} The proportion of judges and proportion of prosecutors in a district who are female are

\textsuperscript{10}The measure of representation was necessary to control for significant differences that exist in the Black population of the federal districts. Preliminary analyses were conducted utilizing separate measures for the proportion of workers who were Black in each district and the population of the district Black. The extreme level of multicollinearity between these two variables precluded the use of separate measure in regression analysis. In response to this problem we created a measure of representation of Black workers compared to Black population in each district which is used in the present analysis.

\textsuperscript{11}In the present analysis we chose to measure only the proportion of the workgroup who are Black. Given the predominance of whites among these decision-makers, this provides a basic measure of diversity, and means of isolating effects of black representation on the sentencing of Black defendants. Across the judicial districts, in the period we consider, Black workers are the predominate non-white group.
measured, though information on gender diversity is used primarily as a control variable in the present analysis.\textsuperscript{12}

Our analytic models incorporate several court and case characteristics as control variables, with the goal of isolating the significance of court workgroup racial diversity to the “processual order” of federal sentencing. We have included measures of the district population such as the proportion of the population over 65, the proportion of the population who are unemployed, and violent crime rates of each district serve to measure other potentially distinguishing characteristics of federal court communities. These measures have been found to be influential in explaining differences in sentencing outcomes across counties (Myers & Talarico 1987; Fearn 2005). We have also included a measure of the proportion of judges appointed by a Democratic president as a proxy measure for the liberalism and conservatism of the justices in each district. Additionally we have included a measure of whether or not the district falls in the South. While the South has traditionally been linked to more punitive attitudes toward sentencing and punishment in general (Ayers, 1984), and racial disparity in criminal justice, there are other reasons to suspect distinct politics of race, crime and justice. Social survey data indicate that white support for more punitive sentencing options such as the death penalty is significantly linked to increased levels of racial prejudice, but only for respondents outside of the South (Borg, 1997). Black formal political representation is also uniquely high in the South, including legislative and legal contexts, which may distinguish the relevance of race to court organization and outcomes in the region. We use a measure of southern location to further isolate and possibly compare relations between court workgroup diversity in sentencing.

\textsuperscript{12}Unlike race where a proportional measure of representation to the population of the district was employed, we relied upon a simple measure of proportion female in each district since the population of women in the population of the district did not vary significantly.
Standard measures of court context such as workload pressure, proportion of cases resulting in departures and violent crimes rates may also influence case processing tendencies and outcomes. Workload pressure may promote time-conscious prosecutors to pursue plea agreements which have the potential to reduce sentence severity (Wooldredge 1989). We measure workload levels by dividing the total number of felony filings in the federal district by the total number of judges in the district resulting in an annual measure of criminal cases per judge. In addition to workload volume, it is important to consider how qualitative workload differences, such as the severity of criminal cases within districts may affect case processing routines generally, and sentencing disparity particularly. Research suggests sentencing severity is greater in contexts with more serious crime; however, racial disparity in sentencing is apparently more likely in criminal cases of a less serious nature owing to increased discretion in these occasions (Tang-Newburg 2003). We measure case severity as the rate of violent crimes in a district. Finally, we measure the proportion of cases that result in departures in a district. Workgroups may be more inclined to follow or make downward departures from sentencing guidelines when faced with large caseloads, pursuing organizational efficiency by disposing of cases more quickly and leniently (Dixon 1995; Eisenstein et al. 1988, Nardulli et al. 1988; Ulmer & Johnson, 2004).

**Analytic Strategy**

Sentence outcome analysis allows for examination of the effects of individual defendant level characteristics controlling for case level legal variables. While traditional single-level analysis has been useful for identifying the effect of case-level variables on sentence outcomes, it fails to take into account the factors unique to courts and their communities which influence sentencing decisions (Britt 2000). Sentencing scholars have recently begun to utilize Hierarchical Linear Modeling to explore the interactive effects of case-level predictors and court or judge-level predictors on sentence outcomes (Britt 2000; Kautt 2002; Ulmer & Johnson 2004; Johnson 2006).
In the federal sentencing system case decisions in the same judicial district are likely to share similarities. Utilizing a hierarchical model allows us to assess the independent impact of district characteristics on the case-level predictors and sentence outcomes, controlling for potentially problematic correlation (Raudenbush 1995; Raudenbush & Bryk 2002).

The utilization of hierarchical models facilitates analysis which controls for potential correlation between the independent defendant level characteristics within specific districts, allowing for the analysis of both members and collective groups simultaneously. In such cases, correlated errors violate the assumptions of regression. Potential correlation is resolved through the process of treating coefficients as random variables and allowing the coefficients of the lower level units to vary based on relationships within higher level group associations (defendant characteristics are allowed to vary by district). In such analysis, regression equations are examined at each level and the level two models indicates how level-one variables are functions of level-two predictors and variability (Luke 2004; Randenbush & Byrk 2002).

Initially, a level one analysis was conducted examining the individual level defendant characteristics. Here, the characteristic included race, gender, citizenship, age, education, plea status, criminal history, offense level, offense type, guideline variables, whether a mandatory minimum was applied, and departure status. At the hierarchical level two model, a variety of district and courtroom characteristics were examined. These variables included percent of district over age 65, percent of district unemployed, felony findings per judge, percent of judges who are female, percent of judges who are Black, percent of judges who received a democratic appointment, percent of female prosecutors, percent of Black prosecutors, violent crime rate, and departure rate.

In the analysis of these factors, additional logistic and linear regression equations are specified including original level one variables. Variables are allowed to vary across districts, eliminating many potential statistical dependency issues. By incorporating a unique random effect
and allowing for variation by district, hierarchical modeling allows for specific examination of defendants nested in districts which share characteristics and may similarly influence individual level defendant outcomes. Issues of inflated statistical power are controlled by appropriately limiting the degrees of freedom with the understanding that cases within districts will share certain similarities (See Johnson 2005; Johnson 2006; and Raudenbush & Bryk, 2002). Models examining incarceration were estimated using hierarchical logistic regression and models examining sentence length were estimated using liner regression and results are based on unit specific models. The following discussion of findings presents descriptive statistics for both level one and level two models.

FINDINGS

Descriptive statistics for both case-level and district-level variables are provided in Table 1. In 2001-2002 approximately 9 percent of all federal judges and 8 percent of all federal prosecutors were Black. Overall just under 9 percent of the courtroom workgroup (including both judges and prosecutors) in our sample is Black. Since we are particularly interested in questions of racial representation in the present paper it is important to examine the difference between among districts in the overall population that is Black. While the average population Black in districts is 12 percent there is great variation among districts throughout the U.S. At the low end, districts like Montana have less than 1 percent Black in the overall population while districts such as Washington D.C. are 60 percent Black. As a result, it is not surprising that workforce diversity varies among the federal districts. Black prosecutors range between 0 and 32 percent of the workforce across the districts and Black judges range from 0 to 33 percent of the judicial workforce. To control for this variance we created a measure of the ratio of Black workers to the Black population in the district.\[^{13}\]

\[^{13}\] Originally we intended to measure the proportion of workers in a district who were Black while controlling for the proportion Black in the general population of the district. Not surprisingly, however, there is a strong correlation between the proportion Black in the general population of a judicial districts, and percent of
disparity index represents a means of examining the dissimilarity between the proportion of the
district population Black and the proportion of the corresponding workgroup Black. This measure
constitutes a proportionality determination created by dividing the percent of the workgroup Black
by the percent of the district population Black. Numbers greater or less than one indicate the
presence and degree of dissimilarity and correspondingly constitute an illustration of representation.

Insert Table 1 here

Similar to previous research on judicial diversity at the state court level (Johnson 2006) we
find more gender than racial diversity among both federal judge and prosecutors. Twenty-one
percent of federal judgeships were held by women and 48 percent of federal prosecutors were
women. While proportions of federal judgeships held by women vary considerably across districts
(0 to 54 percent), female prosecutors are more evenly distributed, ranging between 27 to 73 percent
of the prosecutorial workforce. The proportion of judges appointed by Democratic presidents
varies across districts as well. On average, 43 percent of judges were appointed by Democratic
presidents, but across districts the proportion of Democratic appointments varies from 0 to 100
percent.

On average judges receive a total of 90 felony filings per year, though caseloads per judge
vary significantly across districts. One of the most prominent differences in court contexts across
federal districts is the degree of adherence to the federal sentencing guidelines. On average, districts
depart downward from the guidelines in 33 percent of cases, however some districts depart rarely (a
minimum of 11 percent) while others depart frequently (a maximum of 73 percent).¹⁴ Districts are

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¹⁴ Sentencing analysis often splits departures into two distinct categories: tradition downward departures and
substantial assistance departures. To determine if there were any differences in our findings if we controlled
for these departure types separately we ran additional models replacing the single departure variable with the
also distinguished by social characteristics which may relate to sentencing. Most notably, the age of the district population and the level of violent crime in the district which vary significantly across judicial districts.

Two-level unconditional models were created to measure the amount of variance explained by each level of analysis. Not surprisingly, case-level factors account for the majority of variance in sentence outcomes. However, as indicated in Table 2, differences in district characteristics account for some variance in the sentence outcome.\textsuperscript{15} Seven percent of the variance in the decision to incarcerate and 6 percent of the variance in sentence length can be attributed to differences in the federal districts. Despite the fact that the variance in sentences from district level measures is small it is important to understand which district level variables may be influencing sentence outcomes. One of the overriding goals of the federal sentencing guidelines was to standardize sentences across judicial districts. The fact that any variation exists in sentence outcomes under such a rigid structured sentencing system is worthy of further examination to help understand how various district-level factors affect sentence outcomes.

\textbf{Insert Table 2 here}

To measure the effect of both individual and district level variables on both being sentenced to a term of incarceration (coded 0 for no prison and 1 for prison) and length of incarceration we estimate three models which are found in Table 3. The first model contains individual level characteristics only. Individual fixed effect models were first calculated to determine whether the case-level factors, on average, are related to the dependent variables of incarceration and sentence.

\textsuperscript{15} Because the incarceration outcome is a dichotomous variable, it lacks a meaningful individual-level variance component. If the level 1 model is conceived of in terms of a latent variable (Raudenbush and Bryk, 2002: 334) the level 1 random effect can be assumed to have a standard logistic distribution with a mean of 0 and variance $\pi^2/3$. Under this assumption the intraclass correlation can be estimated, though its meaningfulness depends on the validity of the underlying distributional assumptions (See Johnson, 2006).
length across districts in the analysis (Table 3, Model 1). The first dependent variable in our study is a binary variable coded 1 if the defendant receives a prison sentence longer than 1 month and coded 0 if the defendant receives no prison or a sentence less than 1 month. Our first model contains individual-level characteristics only. We specify this model as:

$$\log \left[ \left( \Phi_{ij} \right) \frac{1}{\Phi_{ij}} (1 - \Phi_{ij}) \right] = \gamma_{00} + \gamma_{q0} X_{qij} + u_{0j} + u_{qj}$$

where:

$$\log \left[ \left( \Phi_{ij} \right) \frac{1}{\Phi_{ij}} (1 - \Phi_{ij}) \right]$$ refers to the log odds of a prison sentence for i individuals nested within j federal districts; $$X_{qij}$$ are the individual-level variables q for case i nested within district j; $$\gamma_{00}$$ and $$\gamma_{q0}$$ are fixed-effect coefficients for the intercept and individual-level variables q; $$u_{0j}$$ and $$u_{qj}$$ are random effects for the intercept and individual-level variables q.

The intercept is comprised of a fixed effect ($$\gamma_{00}$$) representing the average of the district levels of prison sentences and a random effect ($$u_{0j}$$), which is the increment to the intercept associated with county $$j$$. Coefficients for the individual-level variables are also comprised of a fixed ($$\gamma_{q0}$$) and random effect ($$u_{qj}$$). In this instance, fixed effects refer to the average regression coefficient (slope) for a given independent variable across j district in our analysis. The random effect term is the unique increment to the coefficient associated with district $$j$$.

**Insert Table 3 here**

Similar to OLS results, a unit change in the independent variable results in the specified change in the dependent variable. The results in Table 3, Model 1 confirm that all but one (drug crime) of the case-level variables expected to predict receiving a prison sentence remains significant when controlling for the judicial district. As expected, higher criminal history scores and offense levels significantly increase the likelihood of incarceration and sentence length. Being granted a departure from the guidelines significantly decreases both. Offenders with primary offenses for
violent crimes are more likely to receive prison sentences than those sentenced for other types of crime. Finally, going to trial increases the likelihood of incarceration and sentence length.

Extra-legal variables also relate to sentence outcomes. The effects of citizenship on sentence outcomes are especially strong. Non-citizens are much more likely (roughly four times) to be incarcerated as citizens. Female offenders conversely have a significantly decreased likelihood of being incarcerated as men and on average receive shorter sentences. More educated defendants are less likely to be incarcerated and tend to receive shorter sentences than defendants with less than a high school diploma. Older defendants have a decreased likelihood of incarceration. Considering only case-level variables, we find that Black defendants have a significantly higher likelihood of incarceration (20 percent higher odds), but there is little difference between white and Black defendants in sentence length once incarcerated.

In line with other sentencing research examining the effect of court level differences in sentence outcomes (Kautt 2002; Fearn 2005; Johnson 2006) we find significant variance between districts in both incarceration and sentence length even after controlling for legal and extralegal case-level variables. We next introduce case-level variables into the equation. The random effects models presented in Table 4 show that effects of nearly all the legal and extra legal case-level factors vary across judicial districts. These results suggest the impact of guideline factors, case factors and defendant characteristics may differentially affect sentences, depending upon the district where sentencing occurs.

Insert Table 4 here

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16 Following the recommendation of Bryk & Raudenbush (1992) unconditional second level models were fit prior to considering any explanatory variables because “estimation of a random-coefficient regression model is an important early step in a hierarchical analysis. The results from this model guide the final specification of the level one equation and provide a range of useful statistics for subsequent model building at level two” (106).
In addition to measuring the degree to which legal and extralegal case-level variables differently affect sentence outcomes across districts, we seek to understand how specific contextual factors within districts affect sentence outcomes and potentially mediate the effects of case-level variables, particularly defendant race. In Table 3, Model 2 we present full two-level random coefficient models. Our second model contains individual-level variables along with our district-level characteristics (such as population age, crime rate, caseload pressure and workgroup representation).

We specify this model as:

\[
\log \left[ \frac{\Phi_{ij}}{1 - \Phi_{ij}} \right] = \gamma_{00} + \gamma_{0s} W_{sj} + \gamma_{q0} X_{qij} + u_{0j} + u_{qj} X_{ij}
\]

where:

\(\gamma_{0s}\) is the coefficient for district level variable \(s\) for district \(j\) and \(W_{sj}\) is district-level variable \(s\) for district \(j\). All measures are population (grand) mean centered. This model tests for additive district contextual effects.

With the introduction of district level variables the majority of coefficients for individual level characteristics remain statistically significant and predictive in the same direction. Defendant Black has a somewhat stronger effect on likelihood of a prison sentence when level 2 variables are considered, but remains unrelated to sentence length. Turning to the district level variables, the proportion of the population in a district over the age of 65 exerts a positive relationship on the odds of incarceration and sentence length. It appears districts with older populations sentence more severely on average than districts with younger populations. Districts with higher departure rates not surprisingly hand down significantly less severe sentences. Southern districts are moderately more likely to sentence individuals to prison and have longer sentences than non-Southern districts.

There are a number of interesting characteristics about the workers in districts that affect sentence outcomes. Districts with more judges who are appointed by Democrats are moderately less likely to hand down incarceration sentences than those districts with fewer Democratic
appointments. In line with recent multilevel examinations of judge characteristics and sentencing (Johnson 2006) and studies of federal sentencing across time (Schazenbach 2005) we find no relationship between the proportion of judges who are women and sentence outcomes. Districts with higher proportions of female prosecutors, however, are significantly less likely to sentence defendants to a term of incarceration and sentence for shorter periods than those districts with less female representation among prosecutors. This finding suggests more research may be necessary to understand the role female prosecutors may play in shaping the charging and case processing decisions within federal districts. Consistent with our hypotheses about race of decisionmakers, we find no significant relationships between the representation of Black judges or prosecutors and being sentenced to prison. Districts with higher representation of Black prosecutors, however, appear to sentence offenders to slightly shorter terms of incarceration than districts with less Black representation among prosecutors.

Finally, cross level interactions were modeled to test effects of court contextual characteristics on sentencing of Black defendants (Model 3). The cross level effects identify the degree to which district level variables condition the relationship between an individual level independent variable (here defendant race) and the dependant variable. The cross-level effects models contain main effects and cross level effect coefficients. The main effect terms are fixed effect coefficients measuring the average effect of the individual level variable on the sentence outcome. Model 3 estimates cross-level effects between the individual and district-level variables. A cross-level effect identifies the degree to which a district-level variable (here workgroup representation) conditions the relationship between an individual-level independent variable (defendant Black) and the dependent variable (sentence). In these models the coefficients for the individual-level variables are treated as outcomes predicted by district-level variables. We specify these models as:
\[ \log \left( \frac{\Phi_{ij}}{1 - \Phi_{ij}} \right) = \gamma_{00} + \gamma_{0s} W_{sij} + \gamma_{q0} X_{qij} + \gamma_{qs} W_{sij} X_{qij} + u_{0i} + u_{qj} X_{qij} \]

where:

\( g_{sq} \) is the cross-level effect of district-level variable \( s \) and individual level variable \( q \) for the \( j \) districts in our analysis.

We find the main effect of being a Black defendant is significant and positive for incarceration decisions; Black defendants on average are more likely to be sentenced to prison than white defendants. The cross level effect of representation of Black judges and representation of Black prosecutors on incarceration is negative and significant. This indicates the main effect of defendant race on likelihood of incarceration is conditioned by district level variation in Black representation among judges and prosecutors. The effect of Black judge and prosecutor representation on sentence length in cases involving Black defendants is not significant. While the effect of Black representation on the likelihood of Black defendants being imprisoned is statistically significant, it is modest. In the federal sentencing system the overwhelming majority of defendants are sentenced to prison, leaving little variance to explain by district level variation. Despite the need to interpret these results cautiously, we suggest the findings here warrant further exploration.

One of the unique aspects of the present study is the ability to begin measuring the collective effect of diversity across occupational groups. Though the courtroom workgroup is measured using information about judges and prosecutors alone, a limitation we note shortly, this marks an improvement in modeling racial group representation within court organizations. Table 5 illustrates the significance of workgroup diversity to district-level sentencing differences using the same three model structure presented earlier. The effects in Model 1 and 2 are similar to those presented in Table 3. Table 5, Model 3 presents the cross level interactions between defendant race and the racial diversity of the courtroom workgroup measured as the average proportion of Black judges and Black prosecutors in a district divided by the district population Black. The findings mirror those
found in individual occupational groups. Black defendants generally are more likely to be sentenced to prison, but there is no significant relationship between defendant race and sentence lengths. When a Black defendant is sentenced in a district with a higher proportion of workgroup members who are Black, however, their odds of incarceration are significantly less than white defendants and the length of their sentence remains roughly equivalent to white defendants. These findings suggest that the main effect for defendant Black on incarceration is conditioned by the district-level variable workgroup representation, such that the probability of a prison sentence for Black defendants decreases, somewhat, relative to Black representation of judges and prosecutors.

DISCUSSION AND CONCLUSION

Race and criminal sentencing research typically considers only the race of the criminal offender, crime victim and general population to assess whether and how race influences sentencing and outcomes. Invisible in most accounts are the racial identities and group relations of court workers whose decisions ultimately shape case outcomes, and thus the race relations of sentencing. Considering evidence on one hand that “court community” characteristics shape patterns of court outcomes, and prevalent assumptions about the importance of decision maker racial diversity on the other, this paper set out to determine whether workgroup racial composition is related to sentence outcomes generally, and racial differences in sentencing in particular, across federal districts.

Previous research on decision maker diversity and court outcomes yielded mixed results. Much of the prior research suggest nonwhite judges are more lenient or even-handed in sentencing than white counterparts (Gottschall 1983; Holmes et al. 1993; Welch et al 1998; Scherer 2004), while others conclude that nonwhite judges are largely indistinguishable from white colleagues (Uhlman 1978; Schanzenbach 2005; Spohn 1990a; Spohn 1990b; Walker & Barrow 1985), and still others conclude that Black judges are particularly severe in sentencing decisions, especially in cases with
Black defendants (Spohn 1990b; Steffensmeier & Britt 2001). None of these consider the group dynamics of court worker diversity, including proportional representation across categories of court actors, or in relation to area population characteristics. This may overlook group dynamics of court worker diversity especially salient to focal concerns and outcomes of court organizations, which may unmeasured but evident in the orientations, and actions, of court actors. By considering an overlapping expectation of racial group threat and decision maker diversity perspectives – that Black defendants are disadvantaged by the absence of workgroup racial diversity – our paper seeks to advance understanding of the contextual determinants of sentencing.

Overall, support for our research hypotheses is moderate and mixed. As expected, given limited evidence of individual-level differences between white and non-white justice workers, we find a no relationships between race, workgroup representation, and sentencing in general across districts. We do find however a statistically significant mediating effect of Black judge and Black prosecutor representation on race and the likelihood of being sentenced to prison. Though still sentenced severely, Black defendants are apparently sentenced somewhat more equitably with white counterparts, controlling for other relevant factors, in districts with more Black representation. These findings warrant further examination, as they marginally suggest that representation yields greater parity in the use of incarceration.

Our conclusions must be considered in light of limitations of this research. This is a study of workgroup representation and sentencing in one racial group experience, in a very distinct court context, and particular period of time, without consideration of other across and within group differences (i.e., gender, rank, skin tone, or identity), related to our topic. Our interest was to empirically consider the proposed significance of workgroup racial diversity to sentencing, given access to limited data, and not to provide a general assessment of race and sentencing practices.
There are also many limits to employing sentence outcomes to study disparity in justice processing. In particular, our case data only contain individuals who are prosecuted, convicted (either via a plea or trial), and receive a sentence in federal courts. Police, prosecutors and other variably diverse law enforcers at earlier and later stages of these cases make decisions about stopping, searching, prosecuting, sentencing, and so forth, all of which impacts defendant selection into prosecution, sentencing outcomes generally, and sentencing disparity in our sample. Ostensibly race-neutral legal process variables, many of which become emphasized in guideline sentencing (i.e., prior police contact, arrest, conviction, and incarceration), may nevertheless become racialized in court and other workgroup decisions. This is therefore a partial and perhaps very conservative consideration of race, workforce representation, and sentencing in federal courts.

Our models also only partially measure workgroup representation, and therefore do not dramatically expand the study of court workgroups, beyond consideration of judges. Examining representation among judges and prosecutors, alone and collectively, advances understanding of workgroup diversity, but these are only two of the critical categories of influential actors in federal courts. Our findings suggest that forms or thresholds of diversity within individual occupations, and across workgroups, may distinguish the organization of decision making. Understanding the mechanisms linking federal court workgroup representation and sentencing may require including federal probation officers, federal defenders and potentially other court officers (i.e., pretrial services and marshals) in the study of workgroup representation.

Additionally, our models only identify correlations of court workgroup representation to sentence severity, and racial disparities in sentence outcomes, controlling for other case and court contextual factors. While this provides perspective on whether something substantively different transpires in “sentencing worlds” distinguished by more and less racial group representation, it cannot explain the relationship between diversity in courtroom workgroups, court processual orders.
and case outcomes. Here we should again note the absence of individual-level decision-maker data, and clarification that we only consider group characteristics in relation to district-level outcomes.

Although the effects we find are small, involving only slight departures from nevertheless severe sentencing trends, the relationship between federal court workgroup diversity and sentencing clearly requires further attention. The apparent significance of Black representation in federal court workgroups to sentencing severity and racial disparity is somewhat surprising considering the context of decisionmaking. Diversification of the justice workforce has coincided with efforts to limit subjectivity and discretion in decisionmaking, efforts which seem to be in some tension with diversification ideals, insofar as nonwhite or women workers are expected to introduce new values or perspective to these deliberative milieus. Federal sentencing guidelines are one example of this paradox of routinization in the midst of workgroup diversification.

The sentencing trends we observe provide some illustration of the way groups negotiate sentencing, even in the midst of strict sentencing guidelines. This itself should not be taken to suggest the irrelevance of race. Adherence to guidelines may represent conformity to larger organizational or professional norms, pressures non-white decision-makers might be uniquely susceptible to, especially in cases of isolation, as one of few nonwhite officials. There is some evidence that nonwhite publics and professionals are uniquely attuned to issues of fundamental fairness in criminal justice (Ward 2006), an orientation which might make non-white decision makers (or districts with more nonwhite representation) especially inclined to adhere to guidelines, on grounds these rationalize sanctions. We do not specifically study the use of guidelines, however, controlling for their application, we observe its major influence, and that race of the workgroup still relates to sentencing in the districts.

We arrive at a complex picture of the salience of racially representative workgroups to parity in sentencing. As the group threat perspective suggests, Black defendants are disadvantaged
somewhat in districts lacking Black representation in the courtroom workgroup, as they face a relatively greater statistical likelihood of incarceration in this districts, than in districts with more Black representation among judges and prosecutors. To be sure, Black and other defendants in any district, with more or less diverse workgroups, still faced very severe sentences, in the period under consideration. However, this severity appears to be more literally evenly meted out along certain racial lines, that is, as Black and white defendants are concerned, in districts with more representative workgroups. In this sense, if defined only to mean the equal chance of incarceration, racial justice appears to be served by federal court workgroup diversity. Our findings suggest that understanding race relations in crime and justice, including “race-effects” in sentencing, requires consideration of court workforce dynamics.

Our study attempted two particular innovations. First, we find that measuring racial group representation among court actors in reference to the population predicts sentencing differences, suggesting the analytical importance of what we described as “contextualizing” diversity. It is also apparent that measures of multiple decisionmaker groups is helpful to assessing the substantive significance of workgroup representation, at least in the federal court. Although we do not measure these orientations, our findings suggest the focal concerns and decisions of these two groups of key court actors may vary in relation to their racial composition, in a manner partially consistent with group threat expectations, and presumed benefits of workgroup diversity.

We are not yet able to discern the mechanisms by which more representative federal court workgroups may increase racial parity in sentencing. Fully understanding the significance of workgroup racial diversity to court processual orders will require further and more elaborate theoretical and empirical reflection on dynamics of race, organizational behavior, and case outcomes (Ifill 2000). Qualitative interviews and ethnographic research with federal court workers would be especially useful to considering the challenge to understand the organizational behavior of variably
diverse workgroups. These are especially critical to understanding how variously racialized workgroups engage in deliberative interactions.

It is possible and perhaps somewhat apparent in our findings that diversity influences the focal concerns and eventual outcomes of courts under cultural and organizational circumstances which promote and facilitate cross-group interaction and influence. Research in business contexts has established that the substantive impact of workgroup diversity is contingent upon cultural and institutional characteristics of work groups, including worker’s cognitive orientations towards the relevance of diversity in the organization. Workgroups which do most to acknowledge and draw substantively upon their racial and ethnic diversity appear to gain the greatest tangible benefits of the diversity in their organization (Thompson & Ely 2001). While individual level variables such as offense level and agreeing to plea bargain continue to have the strongest predictive effects on sentence outcomes, our findings suggest that racial group representation among key court actors is related significantly, but moderately, to sentencing of Black defendants. More research is needed to understand the interactive relationships of contextual level variables, such as workgroup diversity, in deliberative processes through which sentences and other outcomes take shape.

Bibliography


The Feeney Amendment. Title IV of S. 151, Public Law 108-21


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## Table 2: Hierarchical Models of Incarceration and Sentence Length

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**Between district proportion of variance - Incarceration**

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Note: Intraclass correlations for incarceration are based on the assumption that the level 1 random effect has a variance = $\pi^2/3$. (see footnote 10)

* p<.10 ** p<.05 ***p<.01
Table 3: Hierarchical Logistic Regression Fixed Effect Coefficients for the Association between Individual and District Characteristics on Receiving a Prison Sentence and Prison Length (Individual Actor Judge and Prosecutor)

<table>
<thead>
<tr>
<th>Fixed Effects Coefficients</th>
<th>Model 1 Individual Model</th>
<th>Model 2 Additive Model</th>
<th>Model 3 Cross Level Effects Model</th>
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<td>0.024 -.049*** (.074)</td>
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</table>

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## Fixed Effects Coefficients

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<td>(.301) (.056)</td>
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* *p<.10 **p<.05 ***p<.01
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Guideline Factors

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Offender Factors

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<td>78</td>
<td>103.592**</td>
<td>0.001</td>
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<td>81.347</td>
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Offense Factors

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<th>Incarceration</th>
<th>X²</th>
<th>Variance</th>
<th>Df</th>
<th>X²</th>
<th>La Sentence Length</th>
<th>Variance</th>
<th>Df</th>
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<tbody>
<tr>
<td>Mandatory</td>
<td>0.415</td>
<td>78</td>
<td>144.719***</td>
<td>0.015</td>
<td>78</td>
<td>306.106***</td>
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<tr>
<td>Violent</td>
<td>0.218</td>
<td>78</td>
<td>134.510***</td>
<td>0.005</td>
<td>78</td>
<td>138.425***</td>
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<tr>
<td>Drugs</td>
<td>0.147</td>
<td>78</td>
<td>137.411***</td>
<td>0.015</td>
<td>78</td>
<td>268.257***</td>
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Case Processing Factors

<table>
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<tr>
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<th>X²</th>
<th>Variance</th>
<th>Df</th>
<th>X²</th>
<th>La Sentence Length</th>
<th>Variance</th>
<th>Df</th>
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<tbody>
<tr>
<td>Trial</td>
<td>0.230</td>
<td>78</td>
<td>69.227</td>
<td>0.011</td>
<td>78</td>
<td>179.275***</td>
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<tr>
<td>Hazard</td>
<td>0.090</td>
<td>78</td>
<td>341.714***</td>
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</table>

* p<.10 ** p<.05 ***p<.01
Table 5: Hierarchical Logistic Regression Fixed Effect Coefficients for the Association between Individual and District Characteristics on Receiving a Prison Sentence and Prison Length (Workgroup)

<table>
<thead>
<tr>
<th>Fixed Effects Coefficients</th>
<th>Individual Model</th>
<th>Additive Model</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Prison</td>
<td>Prison</td>
</tr>
<tr>
<td></td>
<td>Y/N</td>
<td>Length</td>
</tr>
<tr>
<td>Individual Model Variables</td>
<td>B (SE)</td>
<td>B (SE)</td>
</tr>
<tr>
<td>Intercept</td>
<td>4.545*** (.214)</td>
<td>3.611*** (.031)</td>
</tr>
<tr>
<td>Criminal History</td>
<td>1.049*** (.030)</td>
<td>0.101*** (.003)</td>
</tr>
<tr>
<td>Offense Level</td>
<td>0.473*** (.016)</td>
<td>0.069*** (.002)</td>
</tr>
<tr>
<td>Departure</td>
<td>-2.487*** (.082)</td>
<td>-0.273*** (.021)</td>
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<tr>
<td>Guideline Midpoint</td>
<td>-0.005*** (.001)</td>
<td>0.001*** (.001)</td>
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<tr>
<td>Black</td>
<td>0.149*** (.054)</td>
<td>-0.009 (.007)</td>
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<tr>
<td>Non-Citizen</td>
<td>1.266*** (.122)</td>
<td>-0.037*** (.015)</td>
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<tr>
<td>Gender</td>
<td>-0.348*** (.048)</td>
<td>-0.057*** (.009)</td>
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<tr>
<td>Over 30</td>
<td>-0.189*** (.044)</td>
<td>-0.001 (.005)</td>
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<tr>
<td>H.S. or more</td>
<td>-0.205*** (.052)</td>
<td>-0.013*** (.005)</td>
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<tr>
<td>Mandatory</td>
<td>-0.260** (.133)</td>
<td>0.097*** (.012)</td>
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<tr>
<td>Violent</td>
<td>0.240*** (.089)</td>
<td>0.075*** (.012)</td>
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<td>Drugs</td>
<td>0.024 (.074)</td>
<td>-0.049*** (.014)</td>
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</table>

% Black Workgroup Index

-0.222*** (.063) | -0.003 (.007)
### Cross Level Effects Model

#### Fixed Effects Coefficients

<table>
<thead>
<tr>
<th>Individual Model</th>
<th>Additive Model</th>
<th>Main Effect</th>
<th>% Workgroup Black Index</th>
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</tr>
<tr>
<td>Y/N</td>
<td>Length</td>
<td>Y/N</td>
<td>Length</td>
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<td><strong>Individual Level Variables</strong></td>
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<tr>
<td>B (SE)</td>
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<td>0.008</td>
<td>0.906***</td>
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<tr>
<td>(146)</td>
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<td>(147)</td>
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<td>Length</td>
<td>Y/N</td>
<td>Length</td>
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<tr>
<td>B (SE)</td>
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<td>0.202***</td>
<td>0.037***</td>
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<td>(044)</td>
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</table>

* p<.10 ** p<.05 *** p<.01