

Can Racial Diversity Among Judges Affect Sentencing Outcomes?

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Abstract

How does racial diversity impact institutional outcomes and (in)equality? Discussions about diversity usually focus on how individuals' identities shape their behavior, but diversity is a group-level characteristic. Scholars must therefore consider the relationship between group composition and the individual decisions that shape institutional outcomes. Using felony case data from a large court system, I explore the relationship between racial diversity among the judges comprising a court and individual judges' decisions. I find that as the percent of Black judges in a courthouse increases, White judges are less likely to render incarceration sentences in cases with Black defendants. Increases in racial diversity decrease the Black-White gap in the probability of incarceration by up to seven percentage-points. However, I find no relationship between a judge's own racial identity and their decisions. This study highlights the importance of conceptualizing diversity as a group characteristic and the relationship between institutional context and outcomes.

Most residents of the United States will never meet their congressional or state representatives, but many will have contact with other state and local officials, including those from the institutions comprising the carceral system, at some point. The environment in which these public officials work, from the building to employee policies to their colleagues, must influence how they approach their jobs, which, in turn, affects the lives of the countless individuals with whom they interact. This paper examines how the composition of a judge's group of colleagues can influence their sentencing decisions in criminal cases, how this influence may differ based on a judge's own personal characteristics, and what this means for disparities in sentencing and how we think about diversity in state and local institutions.

Millions of people are arrested in the U.S. every year, and the vast majority of these individuals appear, are convicted, and receive their sentences in lower-level state courts.¹ State trial court judges' sentencing decisions have far-reaching political consequences for the lives of those accused (Weaver and Lerman 2010; Lerman and Weaver 2014; White N.d.*b*) and also for their families and communities (Burch 2013; Walker 2014; Walker and García-Castañón 2017; White N.d.*a*). The majority of defendants are non-White; and Black and Latinx people, especially, are disproportionately incarcerated in the U.S. (Carson 2018). The citizens who appear most in the largest state criminal courts are those for whom the carceral system may be their primary, if not only, contact with government, influencing their opinions and decisions to participate (Lerman and Weaver 2014). How does the racial composition of the judiciaries they stand before affect their fates?

While research on the effects of racial diversity in the judiciary has largely focused on the impact of individual judges' identities on decision making, much less work has investigated the impact of racial diversity as a contextual feature of the bench. I argue that increasing the representation of racial-minority-group members on the bench decreases racial disparities in felony sentencing, not because of these judges' behavior, but because their presence alters their peers' behavior. These shifts in judges' behavior increase the

¹Far more defendants are convicted in state courts than federal courts; the Illinois circuit courts hear almost as many felony cases in one year as all of the federal district courts combined, for example. (*Illinois Courts* 2013; *U.S. Federal Courts* 2013).

court's likelihood, as a whole, of providing more similar sentences to defendants across racial groups. Political scientists and criminologists have shown that the context in which a trial judge works can influence their sentencing decisions (Eisenstein, Flemming and Nardulli 1988; Ulmer and Johnson 2004). And the representative bureaucracy literature demonstrates that the level of descriptive or "passive" representation within the government workforce influences how policies are implemented and administered, especially as those policies relate to race and gender (including: Meier 1993; Meier, Wrinkle and Polinard 1999; Riccucci and Meyers 2004; Riccucci and Van Ryzin 2017; Meier 2018). The resulting changes in the organization's performance may not be due solely to the behavior of minority-group member bureaucrats; majority-group member bureaucrats may change their behavior as well (Lim 2006; Hong 2017).

Recent scholarship examining policing identifies the role of descriptive representation for improving racial balance in criminal legal outcomes, and it shows that decreasing disparities in these outcomes requires a focus on institutions, rather than just the potential biases of individual actors (Eckhouse 2019*a*; *b*; Sances and You 2017; Kennedy et al. 2017). A significant literature in judicial politics, largely focused on federal courts, examines how individual judges' decisions differ with their racial identities (Harris and Sen 2019). However, we know relatively little about how changes in descriptive representation on the bench affect sentencing outcomes for defendants in the nation's busiest courts (lower-level state courts) or how its influence may amount to more than the sum of individual non-majority-group-member judges' behaviors. This paper makes the novel contribution that group composition can influence solitary public officials' behavior, and that this influence may be more important than any individual's identity when it comes to reducing disparities in institutional outcomes.

To investigate the relationship between racial diversity among judges and sentencing decisions, I analyze approximately 20 years of felony case data from one of the largest unified court systems in the U.S. I find that as the percentage of Black judges in a courthouse increases, White judges are less likely to render incarceration sentences in cases with Black defendants. Black judges may become less likely to render incarceration sentences, in general. These shifts in judicial behavior shrink the Black-White gap in

the probability of an incarceration sentence by up to seven percentage-points, greatly improving equity in this outcome. I distinguish racial diversity within an institution from descriptive representation and suggest potential pathways through which racial diversity among colleagues may influence judges' decisions. For Black judges, having Black colleagues may alleviate pressures associated with tokenism, while White judges might update their beliefs about racial disparities in sentencing or face pressure not to appear discriminatory as they gain Black colleagues.

This paper makes three important contributions. The first is to our understanding of the factors driving elite behavior as well as how we should measure and evaluate diversity within institutions. Diversity is a group-level characteristic, and studies reducing the evaluation of racial diversity to identifying the difference between non-White and White individuals' behavior risk underestimating or mis-identifying the ways diversity can influence group outcomes and individual behavior. Second, identity-based diversity is about more than the different tools that group members bring to the table. And, when it comes to shifts in the level of racial diversity within a group, there is more at stake than the extent to which members feel included. Increases in racial diversity change the context in which group members do their work and, therefore, some of the factors influencing their decisions.

Finally, the findings presented in this paper suggest an important consideration for conceiving state responses to crime. Among the many efforts, including those of a much larger scale, to address the negative impacts of the carceral system, which disproportionately accrue to Black people, are attempts to reduce factors that contribute to mass incarceration, including custodial sentences. The findings presented here suggest that one way to do this may be to increase Black people's representation and power in trial courts. This is not because we should expect Black judges to behave differently from White judges, for example. In fact, on balance, they do not. Rather, it is because increasing Black judges' representation changes the context within which all judges work and, potentially, the norms and commitments driving their decisions.

Theoretical Grounding: Racial Diversity among Judges

There is presently a widespread normative commitment to racial diversity and representation across the U.S. from private industry to government institutions, including those comprising the carceral system. However scholarship in this area, which usually focuses on Black and White officials' behavior, often lacks consistent estimates of a relationship between individual government officials' race and their behavior. With respect to judges and police officers, for instance, some studies point to differences in Black and White judges' sentencing behavior (Welch, Combs and Gruhl 1988; Scherer 2004; Cohen and Yang 2019). Other studies highlight a lack of difference in judicial behavior based on judges' race (Spohn 1990; Schanzenbach 2005; Abrams, Bertrand and Mullainathan 2012), while others, still, find that Black judges are especially punitive (Steffensmeier and Britt 2001). The findings on the role of police officer race in policing outcomes are similarly mixed (see: Legewie and Fagan 2016; Eckhouse 2018). I argue that increasing the representation of racial-minority-group members in the judiciary decreases disparities in felony sentencing, not because of these judges' behavior, but because their presence alters their peers' behavior.

Analyses of the effect of diversity (of any kind) on institutional outcomes must conceive it accurately. Differences in behavior based on personal characteristics is one component of identity-based diversity, but evaluations of this component, alone, cannot capture the full impact of shifts in diversity on institutional outcomes. And individual cannot be "diverse". Individuals contribute to a group's diversity, but a large group with one or two non-majority-group members is still relatively homogenous, for example. Broadening the conception of what diversity is allows us to better understand how it might influence institutional outcomes. The variety of identities represented in an institution are a contextual feature of the institution, and the context in which individuals work is important for explaining individuals' behavior and institutional outcomes.

Culture and norms also influence institutional context, and racial inequality is an enduring feature of American society. White and non-White Americans have different experiences, including their interactions with the state. This is true across a range of settings, including education, social services, and the criminal legal system. Those

who are not White also remain under-represented among institutional officials. While co-racial descriptive representation sometimes results in substantive representation, the actions of individual officials (in legislatures, bureaucracies, or courts) are not enough to address deep-seated inequality. Additionally, attempts to understand the effect of racial diversity among officials on institutional outcomes that focus solely on the behavior of non-majority-group-member officials may fail to capture all the ways that racial diversity can influence institutional outcomes. If, for example, criminal legal officials of different races have different preferences, those preferences may have a weaker influence on their on-the-job behavior than the culture of their institution, which has been shown to influence judicial behavior, for example (Abrams et al. 2022). And institutional culture will be influenced by internal and societal power dynamics that typically favor majority-group member preferences (Ward, Farrell and Rousseau 2009; Legewie and Fagan 2016).

As members of minority racial groups gain representation in homogenous institutions dominated by majority-racial-group members, the altered context can influence the decision making of individuals from all racial groups. In these instances we may expect institutional members' decisions to reflect resulting shifts in the institution's power balance and societal norm commitments. Scholars have identified a number of reasons to explain why White governmental officials' (especially those working in institutions that are products and producers of racial inequalities) decisions might be biased against non-White individuals, including implicit bias and political threat (Greenwald, Oakes and Hoffman 2003; Ward, Farrell and Rousseau 2009; Legewie and Fagan 2016). Non-White government officials working in White-dominated institutions may also face pressures to make decisions that are generally more favorable to majority-group members (Allport 1979; Steffensmeier and Britt 2001).

Social psychological studies of the effect of group diversity on group and individual judgment and decision making suggest some pathways through which racial diversity in government institutions might affect individuals' decisions and, therefore, group outcomes. First, the introduction of individuals that increase a group's diversity may change the type of information exchange that occurs, thereby influencing the knowledge and considerations individuals rely on when making decisions (Jehn, Northcraft and Neale 1999;

Sommers 2006). The general process here is that as racial diversity in a group increases, the content of group conversations will include information related to race and racism that leads individuals in the group to more positively evaluate minority-racial-group members, such that future decisions will be more favorable to members of that racial minority group (Sommers 2006). This pathway might similarly influence institution members who are in the majority and the minority racial group. However, there are additional ways that racial diversity within a group can impact individuals' behavior, and these pathways may differ with the race of the individual in question.

Officials who are members of a majority racial group, especially in jobs that require them to make decisions or judgements about others may make decisions that are less biased against minority racial groups as they gain more colleagues who are minority-racial-group members for three reasons. First, as social psychologists have found, seeing and interacting with a more racially diverse set of colleagues may make majority-racial-group institution members desire not to appear discriminatory against out-group members or biased in favor of in-group members in their behavior. Second, it could remind majority-group-member officials of their own desire to avoid prejudiced behavior (Hans and Vidmar 1982; Antonio et al. 2004; Sommers 2006). Third, a racially diverse group of colleagues may change the extent to which race is a salient consideration in their decision making.

Additionally, scholars have found that while inter-group contact can often lead to negative outcomes, including "exclusionary attitudes" and discrimination toward out-group members (Forbes 1997), repeated, long-term, and positive inter-group contact may lead to more positive outcomes, including decreasing out-group prejudice (Allport 1979; Enos 2014; Selvanathan et al. 2017). Individuals have repeated contact with their colleagues and these interactions are likely positive, at least when compared with the negative sentiments they are more likely to associate with civilian interactions, whether these be defendants, arrestees, or benefits applicants. Overall, we might expect these positive experiences with peer racial-out-group members to improve majority-racial-group member officials' perceptions and treatment of minority-racial-group members.

For non-White institution members, the pressures of tokenism may subside as

more minority-racial-group members join an institution and their under-representation within that institution becomes less extreme. When there are low levels of minority-group representation in an institution, minority-group members of the institution may experience tokenism, and feel pressure to conform to the majority-groups' typical behavior (Asch 1956; Steffensmeier and Britt 2001). The pressures associated with tokenism occur due to the scrutiny and visibility that come from being a member of an extreme minority group (Cook and Glass 2015; Sommers 2006; Yoder 1991; Kanter 1977). As the pressures alleviate, minority-racial-group-members may feel more able to exhibit behavior that is favorable to members of their racial group, more broadly. They may also prioritize their own or their in-group's well-being over the commitments of a racially homogenous majority-racial-group-member-led institution.

I have presented many pathways through which racial diversity in institutions may influence individuals' behavior, but, taken together, they all suggest that this feature of group context will lead majority- and minority-racial group members to behave in ways that make institutional outcomes less oppressive and more equitable. Importantly, all of the presented pathways are interactive in nature. In order for racial diversity to influence decision making in institutions, institution members must be able to see and interact with those colleagues whose presence increases diversity within the institution.

Criminal trial courts are a useful lens through which to study the processes outlined above. First, trial court judges hear and decide cases alone, usually in their own courtrooms. However, they see and interact with colleagues in the hallways, elevators, and parking garages. Some criminal trial courts even assign judges to working groups in which judges can discuss the work of the court and receive communication from upper-level officials. Second, the work judges do is the type we would expect to be susceptible to shifts in institutional context related to race. Judges make judgements, and these are the types of individual decisions where social psychologists have found that individuals are susceptible to group diversity. In fact, much of these findings come from studies of juries, including the role of jury diversity on individual juror's pre-deliberation decisions (Sommers 2006). Additionally, trial court judges make decisions in a relatively high-discretion, high-information environment, the type where the representative bureaucracy

literature suggests passive representation may have substantive effects (see discussion in: Baumgartner et al. 2021, pp. 862).

I derive the following expectations about the relationship between racial diversity and sentencing in trial courts based on the theory presented above. In general, I expect increases in racial diversity among judges to lead to decreases in punitiveness and increases in equity in sentencing outcomes. Focusing on Black and White judges, due to theoretical relevance and the nature of the data, which I discuss below, I expect increases in Black judicial representation will lead to decreases in the probability of incarceration and sentence length. As the court becomes more racially diverse, I expect White and Black judges to become more lenient toward Black defendants due to the processes described above. Such behavioral shifts will decrease punitiveness, overall, since the vast majority of criminal defendants are Black. If judges become more lenient in their sentencing of Black defendants, this will also decrease the Black-White gap in sentencing, bringing Black defendants' sentences closer in line with those of White defendants. It is possible that White judges will adjust their sentencing of White defendants as well, rendering slightly more punitive sentences to these defendants, which would also increase equity in sentencing. Finally, because the theory implies at least some interaction among colleagues, I only expect to find a relationship between racial diversity among judges and judges' sentencing decisions when judges work in the same location as those judges whose presence increases racial diversity on the bench.

While much of the research on racial diversity among judges has focused on how individual judge's racial identities influence their decisions, some studies have conceived of racial diversity more broadly, lending support to the present argument. Studies of three-judge Courts of Appeals panels show that one judge's characteristics can affect how the other two judges vote and, ultimately, the panel's final decision (Cox and Miles 2008*a*; *b*; Kastlelec 2013). The evidence from federal district courts is weaker, Ward, Farrell and Rousseau (2009) find that increased Black prosecutorial, though not judicial representation, is associated with decreases in sentencing disparities between Black and White defendants in federal judicial districts while Schanzenbach (2005) finds weak relationships between racial representation in judicial districts and judges' sentencing.

Previous studies in this area represent important advances in the study of the relationship between institutional context and outcomes. However, they do not investigate the process by which shifts in individual judges' decisions lead to these institutional outcomes. Additionally, the analyses that follow use data from a large lower-level state trial court, the type of court where the vast majority of criminal cases are heard in the United States highlighting the potential scope and importance of this relationship.

The Circuit Court of Cook County, Criminal Division

The data used in this paper come from the Circuit Court of Cook County in Illinois, one of the largest unified court systems in the U.S. The Circuit is composed of six municipal districts, with the First Municipal District covering the entire city of Chicago. A chief judge presides over the Circuit, which includes non-judicial offices and the judiciary. The Criminal Division is responsible for hearing all of the county's felony cases.

Criminal Division judges hear cases in three courthouses: the George N. Leighton Criminal Court Building in Chicago and the Skokie and Bridgeview Courthouses in suburban Cook County.² Felonies originating (occurring) in the city of Chicago are heard in the city's Leighton Criminal Building, and felonies originating outside of the city limits are heard by a Criminal Division judge in either Skokie or Bridgeview. The Criminal Division judges in the suburbs share courthouses with the other judges of their municipal districts who hear many different types of cases. The Division's presiding judge and approximately 30 trial judges have courtrooms in Chicago's Leighton Building, and there are usually three to six Criminal Division trial judges with courtrooms in the Skokie and Bridgeview courthouses.

The distinction between the Chicago and suburban courthouses highlights a key point of the theoretical argument presented in the previous section. In order for racial diversity among judges to impact individual judges' behavior, judges must see and, potentially, interact with the colleagues whose presence increases racial diversity on the

²Circuit court judges in the Cook County are elected in competitive, partisan elections at the county or sub-circuit level. Judges serve six-year terms and run in end-of-term non-partisan retention elections.

bench. Judges sharing courthouses with judges who hear different, non-criminal, matters or those who work in courthouses alone will not have the opportunity to respond to shifts in racial diversity among their divisional colleagues, nor will defendants standing before those judges experience any related changes in sentencing behaviors.

The theory developed here can help us understand judicial behavior in criminal trial courts serving locations in which members of a minority group are over-represented among potential defendants and underrepresented among the judiciary, which is the case in much of the U.S. However, the theory is likely most applicable to courts serving relatively large, densely populated areas where many judges have courtrooms in a single courthouse. This is common in counties with large cities like Chicago, including Philadelphia County, PA; Harris County, TX; and Los Angeles County, CA and in counties with medium- and smaller-sized cities like Middlesex County, NJ and Macomb County, MI, for example. Courts in these types of locations handle a significant portion of felony cases in the U.S; according to the FBI's Uniformed Crime Reporting over 40 percent of arrests occur in cities with at least 50 thousand residents, and these figures do not even account for the arrests in those cities' surrounding counties that will be heard in the same court systems (*Crime in the United States* 2019). To provide more convincing evidence of the argument's scope, I conducted analyses of court data from Harris County, TX (included in the appendix), and the results support those presented below.

Data

The Cook County, IL, Criminal Division data used for this project include just over 444,000 felony cases heard from 1995 through 2013 in which the defendant was *not* found not guilty.³ According to the 2013 Annual Report of the Illinois Courts only three percent of felony defendants were found not guilty, suggesting the data used in this analysis capture nearly the universe of felony cases.⁴ However, those missing due to a not guilty

³The court would not release data for cases where the defendant was found not guilty, so the data technically do not represent the universe of the county's felony cases. See online appendix for more information on the data and cleaning process.

⁴see: <https://www.illinoiscourts.gov/reports/annual-report-illinois-courts/>

verdict are likely not missing at random and could introduce bias into analyses. Cases are randomly assigned to judges, but judges only sentence defendants in cases in which the defendant pleads guilty or is convicted. Such bias would reduce the number of defendants in the data who are ineligible for a sentence of any kind. If increases in racial diversity among judges leads to more lenient sentencing overall the exclusion of not-guilty verdicts should weaken analysis results, because it would reduce the number of defendants that judges would not sentence incarceration.

Each case is identified by a case number, and includes the following information: initiation date; defendant’s last name, date of birth, race, and sex; judge’s name; statute under which the offense fell; description of charge; the class of the original charge; final disposition and date it was rendered; length of minimum and maximum sentence; courthouse and number of the courtroom where the case was heard. The defendant in the vast majority of these cases— just under 76 percent— was Black, while White and Latino defendants were charged in 11 and 12 percent of cases, respectively. As shown in Table 1, the defendants in these cases are mostly Black, male, and young, and the defendants in about half of these cases were sentenced to incarceration for some period. Felony charges are charges for which the defendant is eligible for at least one year of incarceration. Felonies are categorized into classes based on severity, which are then used to guide sentencing decisions. All felony charges—except those in two most serious felony classes, which were dropped from the data—used in these analyses are eligible for probation in lieu of incarceration.⁵

Overall, incarceration sentences have decreased over time (left-side panel of Figure 1). Additionally, the frequency of incarceration varies with defendant race. Cases with Black defendants end with incarceration sentences far more frequently than those with either Latinx or White defendants, and cases with Latinx defendants end with incarceration sentences slightly more frequently than those with White defendants.

There were a total of 79 Criminal Division judges during this period, with 38-40

⁵In Illinois, judges’ discretion with respect to sentencing is generally limited within the terms established by the Illinois General Assembly’s “Penalties for Crimes in Illinois”, the state’s sentencing guidelines. See: <http://www.ilga.gov/commission/lru/2005PFC.pdf> for details.

Table 1: Average value of case characteristics across locations

	Bridgeview	Chicago	Skokie	Total
Black Defendant	0.895 (0.307)	0.788 (0.408)	0.515 (0.500)	0.761 (0.427)
Female Defendant	0.0861 (0.280)	0.142 (0.349)	0.134 (0.340)	0.136 (0.343)
Defendant Over 30	0.383 (0.486)	0.428 (0.495)	0.477 (0.499)	0.431 (0.495)
Felony Class	4.854 (1.137)	5.112 (1.147)	4.890 (1.128)	5.058 (1.148)
Incarceration	0.463 (0.499)	0.471 (0.499)	0.415 (0.493)	0.463 (0.499)

Mean values with standard deviations in parentheses.

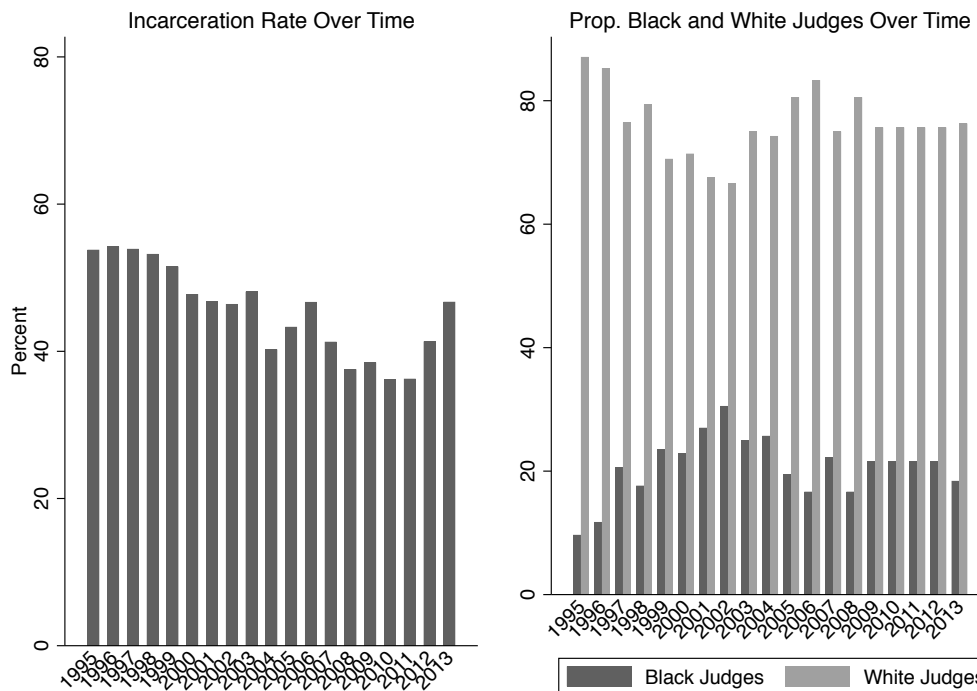


Figure 1: Annual Incarceration Rates and Judicial Representation

judges serving in the Division each year—2-4 in the suburban courthouses and the rest in Chicago’s Leighton Building. Each judge has their own courtroom. As shown in Table 2 each judge hears an average of roughly 2400 cases per year and Black and non-Black judges hear cases with similar characteristics (Table 3).⁶ Black judges do preside over cases involving significantly more Black defendants and more serious charges and fewer older defendants. However, because Black judges are typically more lenient than White judges, the main concern with respect to case characteristics would be that this was because Black judges received cases more likely to qualify for a lenient sentence, which does not appear to be the case. The minimum cases per judge per year in Chicago is considerably lower than in the suburban courthouses, because over the course of the study

⁶Felony class is measured ordinally from least to most serious and includes three misdemeanor classes since defendants can be convicted of a different (usually less serious) offense than the original charge. A value of “1” corresponds to a Class C misdemeanor and “7” corresponds to Class 1 felony. The mean value of “5” corresponds with a Class 2 felony, which involves three to seven years in prison or up to four years of probation instead.

period some of the judges' courtrooms no longer heard felony cases.⁷

Table 2: Cases Per Judge Per Year

	Mean	Median	Min.	Max.
Bridgeview	1767.85	1539	450.00	3163.00
Chicago	2669.66	1057	50.00	11559.00
Skokie	1421.73	1512	373.00	2188.00
Total	2479.11	1123	50.00	11559.00

Table 3: Case Characteristics By Judge Race

	Non-Black Judges	Black Judges	Total
Black Defendant	0.760 (0.427)	0.797 (0.403)	0.767 (0.423)
Female Defendant	0.136 (0.343)	0.136 (0.342)	0.136 (0.343)
Defendant Over 30	0.435 (0.496)	0.420 (0.494)	0.432 (0.495)
Felony Class	5.048 (1.145)	5.086 (1.157)	5.055 (1.147)

Mean values with standard deviations in parentheses.

I used judges' names to merge the case data with biographical information from local legal organizations, including Chicago Appleseed and Chicago Council of Lawyers. I also conducted Internet searches to identify judges' race and gender when necessary and possible. The vast majority of judges are male (84 percent) and White (71 percent). However, the racial composition of the Criminal Division bench has fluctuated over time.

⁷This might occur because a courtroom was used for other purposes. Additionally, cases heard in four courtrooms that heard fewer than 20 cases in certain years (120 cases total) were dropped from the summary table.

I measure racial diversity on the bench as the proportion of Black judges in the Criminal Division each year.⁸ Throughout this period, only approximately three percent of judges could be identified as having a racial or ethnic identity other than Black or White. The proportion of Black judges on the bench each year, shown in the right-side panel of Figure 1, rose fairly steadily from 1995 through 2002 and then decreased through 2008, after which it increased and leveled off, but never reached the level it did in 2002. Both Black and White judges sentence Black defendants to incarceration more frequently than White defendants, and White judges are somewhat more punitive than Black judges, overall. Black judges issue incarceration sentences in 45 percent of cases with Black defendants and 33 percent of cases with White defendants, and White judges issue incarceration sentences in 50 percent of cases with Black defendants and 35 percent of cases with White defendants.

Judicial Diversity and Sentencing

This section describes the empirical approach to evaluating the relationship between judges' colleagues' characteristics and judges' sentencing decisions in this paper. I use the data described above to estimate the following linear probability and ordinary least squares regression models:

$$sentence = \beta_0 + \beta_1(\%black\ judges) + \beta_2(black\ defendant) + \beta_4Z + \zeta + \varepsilon \quad (1)$$

$$sentence_{ij} = \beta_0 + \beta_1(\%black\ judges_{ij}) + \beta_2(black\ defendant_{ij}) + \beta_4Z_{ij} + W_j + \zeta + \varepsilon \quad (2)$$

⁸Similar analyses to those presented below included a monthly measure (see Appendix) or measured diversity using the percentage of judges who were not White men and produced similar results.

$$\begin{aligned}
sentence_{ij} = & \beta_0 + \beta_1(\%black\ judges_{ij}) + \beta_2(black\ defendant_{ij}) \\
& + \beta_3(\%black\ judges_{ij} \times black\ defendant_{ij}) + \beta_4 Z_{ij} + W_j + \zeta + \varepsilon \quad (3)
\end{aligned}$$

where i and j represent a case and a judge, respectively. The dependent variable in most of the models is dichotomous, taking a value of one if a defendant in a case is incarcerated to prison or jail and zero otherwise. In a few of the models, the dependent variable is sentence length, measured in days. The main independent variable is the percent of Criminal Division judges who are Black each year, measured either across the all three courthouses comprising the Division, or just in Chicago's Leighton Building. Each model also accounts for the race of the defendant and includes an indicator for whether the defendant in a case is Black. Equation 1 is a pooled model while Equations 2 and 3 include judge-level fixed effects (W_j) to account for unobserved factors affecting an individual judge's decisions and the likelihood that their decisions across cases may be related. All models include standard errors clustered at the judge level to account for correlation between an individual judge's decisions and a time trend (ζ) to address broader trends that may impact the court's work.⁹

The percent of Criminal Division judges who are Black, shown on the right side of Figure 1, increased through 2002 after which it decreased then leveled off. It is important to note that while defendants' cases are randomly assigned to judges in Chicago's Leighton Courthouse (though not in the suburban courthouses), racial diversity on the bench is not randomly assigned across cases. However, the random assignment of defendants' cases to judges should ensure that case assignment is not systematically related to defendant characteristics or any individual judge's sensitivity to the level of racial diversity among their colleagues.

Z is a set of defendant, case, and judge characteristics. These include defendant

⁹The data are unbalanced due to each judge hearing multiple cases per year. A year trend, judge-level fixed effects, and clustered standard errors are, therefore, used to address the relationship between the decisions in any judge's overall caseload, judges' response to racial diversity among colleagues, and shifting trends in court processes, crime, and sentencing, more broadly.

race, age, and gender. It accounts for the seriousness of the charge, measured ordinally from least to most serious class of felony. Z also includes indicators for whether a judge is up for retention at the time they hear a case and, in some of the pooled models includes, indicators for whether a judge is a democrat, judge gender, judge race, and whether the judge was on the bench the previous year (to account for turnover among the judges).

Equation 1 tests the expectation that increases in Black judicial representation should decrease judges' punitiveness in criminal sentencing. β_1 represents the change in the probability that a case will end with an incarceration sentence when Black judicial representation increases by one percentage point. Negative values on β_1 mean that as Black judges gain more representation on the court, sentencing becomes more lenient. Equation 2 is similar to Equation 1, but it incorporates judge-level fixed effects (W_j). Equation 3 evaluates whether judges' responses to racial diversity within their group of colleagues varies with race of defendant. This model interacts the indicator for when the defendant in a case is Black with the main independent variable, such that β_1 represents the change in the probability of an incarceration sentence (or the change in sentence length) associated with a one percentage point increase in Black judicial representation in cases with White defendants while β_3 represents the additional impact on sentencing for cases with Black defendants.

Results

Results from analyses using Equation 1 to evaluate the relationship between racial diversity among judges and whether or not a case ends with incarceration are included in Table 4. The main independent variable—the percent of judges who are Black—is measured at the Division level, and is the percent of judges who are Black across all courthouses hearing felony cases in Cook County. These are pooled linear probability models that do not include judge fixed effects, and they include cases heard by judges of all races. The results in the first column come from an analysis of data from all of the courthouses where Criminal Division judges hear felony cases in Cook County, and the results in the second, third, and fourth columns are from analyses of Bridgeview, Skokie, or Chicago cases, re-

spectively. The first column shows that, overall, increases in Black judges' representation among Criminal Division judges leads to a decrease in the probability of incarceration. A one percentage-point increase in Black judicial representation leads to a 0.3 percentage point decrease in the probability that the defendant in a case will be sentenced to incarceration.

Table 4: Racial diversity and incarceration- outcome is whether defendant was sentenced to incarceration. Pooled models with standard errors clustered at judge level.

	Incarcerate	Incarcerate	Incarcerate	Incarcerate
Perecent Bl. Judges	-0.00252 ⁺ (0.00143)	0.00155 (0.00669)	0.00466 (0.00703)	-0.00403* (0.00117)
Black Defendant	0.146* (0.0105)	0.0959* (0.0190)	0.123* (0.0224)	0.145* (0.00984)
Latino Def.	0.000382 (0.00786)	-0.0726 (0.0419)	0.0264 (0.0282)	-0.00688 (0.00706)
Oth. Race Def.	-0.0955* (0.0199)	-0.00425 (0.0692)	-0.146* (0.0145)	-0.0989* (0.0228)
Defendant Age	0.00235* (0.000254)	0.00220* (0.000487)	0.000846 (0.000625)	0.00263* (0.000264)
Female Defendant	-0.107* (0.00700)	-0.123* (0.0135)	-0.0494* (0.0168)	-0.113* (0.00663)
Felony Class	0.0151* (0.00403)	0.0479 ⁺ (0.0210)	0.0295* (0.00647)	0.0100* (0.00409)
Ret. Election	0.0123 (0.0178)	0.0104 (0.0516)	-0.0389 (0.0760)	0.0235 (0.0170)
Year Trend	-0.00804* (0.00176)	-0.00841 (0.00584)	-0.0261* (0.00571)	-0.00578* (0.00160)
Constant	0.337* (0.0285)	0.165 (0.0845)	0.387* (0.170)	0.364* (0.0279)
Courthouse	All Courthouses	Bridgeview	Skokie	Chicago
Observations	387601	33319	39086	315196

Standard errors in parentheses

⁺ $p < 0.10$, * $p < 0.05$

Whether judges adjust their sentencing as their colleagues become more racially diverse because they positively update their opinions of Black defendants or because they desire to render decisions that do not appear discriminatory to a more diverse set of colleagues, judges must have the opportunity to see and interact with those colleagues who add to the bench's diversity in order for it to affect their behavior. Criminal Division judges hearing cases in the suburban courthouses do not see their colleagues in Chicago (where the vast majority of cases are heard) on a regular basis. Rather, they see the other judges—handling other legal matters—with whom they share a municipal courthouse.

Criminal Division judges in Bridgeview and Skokie are colleagues with the Criminal Division judges in Chicago in name only, and all but one of the Black Criminal Division judges throughout the entire study period have had courtrooms in Chicago's Leighton Building. We should, therefore, not expect judges in the suburban courthouses to be sensitive to shifts in Black judicial representation in the Criminal Division. The second and third columns of Table 4 provide support for this expectation—the coefficient for the measure of racial diversity is not statistically significant in the analyses of data from either of the suburban courthouses. The fourth column of Table 4 reports the results from a model analyzing just cases heard in the Chicago courthouse. The coefficient on the measure of racial diversity among judges is statistically significant—a one percentage point increase in Black judicial representation leads to a 0.4 percentage point decrease in the probability of an incarceration sentence.

The results included in Table 5 come from analyses of just those cases heard in Chicago's Leighton Building. For these models, and all that follow, the percent of judges who are Black is calculated just among Criminal Division judges who hear cases in Chicago's Leighton Building—colleagues working in the same location. The results in the first column are from a pooled linear probability model, while the results in the remaining columns are from Equations 2 and 3, incorporating judge-level fixed effects.¹⁰ Importantly, the model in the first column includes measures for judge race and ethnicity, gender, and partisan affiliation, and whether a judge was a member of the Criminal Division in the previous year (to account for judge turnover), none of which have a significant relationship with whether a case ends with an incarceration sentence, nor does their inclusion dull the relationship between racial diversity among judges and incarceration sentences. These measures are not included in the other columns, because those models include judge fixed effects to account for important characteristics across judges that may relate to their sentencing decisions, feelings about race, and responses to racial diversity among colleagues, including party identification and previous legal experience, for example.

¹⁰There are fewer observations in Column 1 due to inclusion of additional covariates and related list-wise deletion.

Table 5: Racial diversity, incarceration, and sentence length in Chicago- outcome is whether defendant was sentenced to incarceration or length of sentence. Standard errors clustered at judge level.

	Incarcerate	Incarcerate	Incarcerate	Sentence Length	Sentence Length
Perecent Bl. Judges	-0.00387* (0.00144)	-0.00298* (0.00128)	0.000681 (0.00152)	-13.04* (3.706)	-11.79 (11.66)
Black Defendant	0.151* (0.00883)	0.139* (0.0101)	0.222* (0.0188)	-52.65 (50.30)	-24.29 (231.9)
Latino Def.	-0.00558 (0.00865)	-0.00654 (0.00679)	-0.00495 (0.00659)	-70.39 (51.51)	-69.85 (54.72)
Oth. Race Def.	-0.0962* (0.0260)	-0.0965* (0.0214)	-0.0846* (0.0213)	-197.0* (63.20)	-192.9* (82.36)
Defendant Age	0.00293* (0.000387)	0.00257* (0.000254)	0.00258* (0.000253)	4.586* (0.539)	4.591* (0.537)
Female Defendant	-0.118* (0.00780)	-0.115* (0.00641)	-0.115* (0.00640)	-179.6* (11.86)	-179.7* (11.59)
Black Judge	-0.0448* (0.0188)				
Latinx Judge	-0.0120 (0.0151)				
Female Judge	0.0134 (0.0270)				
Dem. Judge	0.0161 (0.0231)				
CD Judge in Prev. Year	0.00700 (0.0124)				
Felony Class	0.00820 ⁺ (0.00472)	0.0109* (0.00379)	0.0108* (0.00378)	220.6* (8.559)	220.5* (8.605)
Ret. Election	0.0104 (0.0128)	0.00224 (0.0120)	0.00263 (0.0119)	57.67 (43.56)	57.80 (43.74)
Year Trend	-0.00551* (0.00170)	-0.00601* (0.00180)	-0.00602* (0.00180)	-8.623* (3.198)	-8.627* (3.190)
Black Defendant × Perecent Bl. Judges			-0.00468* (0.00125)		-1.597 (10.72)
Constant	0.352* (0.0334)	0.348* (0.0279)	0.283* (0.0293)	-158.4 (110.2)	-180.5 (245.4)
Judge FE	No	Yes	Yes	Yes	Yes
Courthouse	Chicago	Chicago	Chicago	Chicago	Chicago
Observations	217014	315196	315196	315196	315196

Standard errors in parentheses

⁺ $p < 0.10$, * $p < 0.05$

The second column of Table 5 shows that, when incorporating judge fixed effects, a one percentage-point increase in the percent of Black judges on the bench is associated with a 0.3 percentage point decrease in the probability of an incarceration sentence, without specific consideration of a defendant's or judge's own race. The third column of Table 5 considers whether defendants' race may moderate this relationship, as the theory suggests, with the inclusion of an interaction term between the percent of judges in the courthouse who are Black and an indicator for whether the defendant in a case is Black. Therefore, the coefficient on the main term represents the relationship between racial diversity on the bench and sentencing in cases with White defendants and the coefficient on the interaction term represents any additional impact of racial diversity on sentencing in cases with Black defendants (regardless of the race of the judge). The coefficient on the main term for the percent of judges in the courthouse who are Black is not statistically significant (Column 3 of Table 5), suggesting that there is not a relationship between racial diversity among judges and incarceration sentences in cases with White defendants. However, the coefficient on the interaction term is statistically significant, suggesting that Black judicial representation is related to sentencing in cases with Black defendants. More specifically, a one percentage-point increase in the percent of Black judges on the bench is associated 0.4 percentage-point decrease in the probability of incarceration in cases with Black defendants.

Racial diversity among judges does not change how judges sentence in cases with White defendants, but it decreases punitiveness in cases with Black defendants, thereby decreasing the Black-White gap in the probability of an incarceration sentence. For example, if the number of Black judges in the Leighton Building were to increase from 3 (ten percent of the 30 judges with courtrooms in Leighton in a given year) to 6 (20 percent of the judges), the difference in the probability of an incarceration sentence between Black and White defendants would decrease from 18 percentage points to 13 percentage points. This decrease in inequality is due to the probability of incarceration in cases with Black defendants decreasing from 53 percent to 49 percent. This may seem like a small decrease, but roughly 8,667 people were convicted of felonies in Cook County, IL in 2020. If 75 percent of those defendants were Black (as is the case in the data used

for this study), that would suggest a potential decrease in the number of incarcerations from 3,445 to 3,185, meaning 260 additional people would have their freedom. If each of those 260 people would have been sentenced to two years in prison (shorter than the average sentence length in the data, which is over three years), that would also reduce the state's incarceration spending by over 17 million dollars.¹¹

The last two columns in Table 5 present results from models considering the relationship between racial diversity among judges and sentence length, measured in days. The coefficient on the percent of judges in the courthouse who are Black is statistically significant and suggests that a one percentage point increase in Black judicial representation leads to a 17-day decrease in sentence length. The coefficients on the indicators for Black and Latinx defendants are not statistically significant, and the final column in Table 5 shows that defendant race does not moderate the relationship between racial diversity among judges and judges' sentencing decisions.¹²

The results in Table 6 incorporate the role of judges' racial identities into the analyses, illustrating how this characteristic shapes the relationship between racial diversity among judges and sentencing decisions. The first three columns present results from analyses of just those cases heard by White judges, and the last three columns include results from analyses of cases heard by Black judges. The dependent variable in all of these models is the dichotomous measure indicating whether the defendant in a case was sentenced to incarceration. The coefficients on the measure of Black judicial representation in the first two columns show that White judges render fewer incarceration sentences as they gain Black colleagues (though $p = 0.057$ for the coefficient in the second column). However, the model in the third column includes an interaction term

¹¹According to: <https://www.illinoiscourts.gov/reports/annual-report-illinois-courts/> and <https://www.vera.org/publications/price-of-prisons-2015-state-spending-trends/price-of-prisons-2015-state-spending-trends-prison-spending>

¹²The coefficient on the indicator for defendants of other races is statistically significant and substantively large across the models. The defendants in these cases were mostly identified as Asian and also included defendants who were identified as Indigenous and Middle Eastern in the data. Only 0.34 percent of cases had a defendant who is included in this category.

between the measure of racial diversity among judges and whether the defendant in a case is Black. The coefficient on the percent of Black judges in Column 3 of Table 6 is not statistically significant, suggesting that White judges do not alter their sentencing in cases with White defendants as they gain more Black colleagues. The coefficient on the interaction term, on the other hand, is statistically significant, suggesting that, for White judges, a one percentage-point increase in Black judicial representation leads to a 0.45 percentage-point decrease in the probability of incarceration in cases with Black defendants.

Table 7 includes predicted probabilities of incarceration for Black and White defendants derived from the interaction between racial diversity among judges and defendant race (with other variables held at their means). The probability of incarceration decreases significantly for Black defendants as White judges gain Black colleagues, while the probability of incarceration in cases with White defendants remains unchanged. When Black judges represent eight percent of the judges in the Leighton building (the lowest level of Black judicial representation in the time period), the probability of an incarceration in cases with Black defendants heard by White judges is 54 percent. When Black judicial representation is at its highest, 22.5 percent, the probability of incarceration in cases with Black defendants heard by White judges is 48 percent. These results for White judges are consistent with a theory where White judges feel pressure to behave more equitably as they gain Black colleagues or a theory in which White judges update their beliefs about and/or behavior towards Black defendants as they gain Black colleagues.

Black judges may become less punitive as they gain Black colleagues, regardless of the race of the defendant in a case. The coefficient on Black judicial representation in the fourth column of Table 6 suggests that a one percentage-point increase in the percent of Black judges on the bench leads to a 0.7 percentage point decrease in the probability of an incarceration sentence; however, it misses statistical significance at conventional levels ($p = .072$) in the model in the fifth column, which includes judge-level fixed effects, but there are only 16 Black judges during this study period. The results in the final column, which includes an interaction between defendant race and Black judicial representation, further, suggest that defendant race does not moderate Black judges' response to shifts in

Table 6: Racial diversity, incarceration, and judge race in Chicago- outcome is decision to incarcerate. Standard errors clustered at judge level.

	Incarcerate	Incarcerate	Incarcerate	Incarcerate	Incarcerate	Incarcerate
Perecent Bl. Judges	-0.00439*	-0.00329 ⁺	0.000910	-0.00678*	-0.00512 ⁺	-0.00349
	(0.00170)	(0.00168)	(0.00197)	(0.00193)	(0.00264)	(0.00330)
Black Defendant	0.144*	0.137*	0.232*	0.126*	0.129*	0.168*
	(0.0134)	(0.0136)	(0.0238)	(0.0146)	(0.0159)	(0.0432)
Latino Def.	-0.00555	-0.00630	-0.00429	-0.0199	-0.0106	-0.0101
	(0.00943)	(0.00897)	(0.00869)	(0.0145)	(0.0147)	(0.0145)
Oth. Race Def.	-0.104*	-0.105*	-0.0918*	-0.0840*	-0.0819*	-0.0784*
	(0.0292)	(0.0268)	(0.0269)	(0.0231)	(0.0287)	(0.0269)
Defendant Age	0.00273*	0.00266*	0.00268*	0.00266*	0.00258*	0.00258*
	(0.000318)	(0.000317)	(0.000314)	(0.000706)	(0.000660)	(0.000662)
Female Defendant	-0.108*	-0.109*	-0.109*	-0.133*	-0.132*	-0.132*
	(0.00797)	(0.00764)	(0.00763)	(0.0167)	(0.0168)	(0.0168)
Felony Class	0.00848 ⁺	0.00970*	0.00962*	0.0166*	0.0159 ⁺	0.0158 ⁺
	(0.00476)	(0.00452)	(0.00452)	(0.00753)	(0.00775)	(0.00773)
Ret. Election	0.0337	0.00562	0.00619	-0.00979	-0.0150	-0.0149
	(0.0221)	(0.0150)	(0.0149)	(0.0251)	(0.0198)	(0.0198)
Year Trend	-0.00494*	-0.00565*	-0.00568*	-0.00782*	-0.0117*	-0.0116*
	(0.00212)	(0.00208)	(0.00207)	(0.00250)	(0.00195)	(0.00194)
Black Defendant × Perecent Bl. Judges			-0.00539*			-0.00209
			(0.00167)			(0.00258)
Constant	0.361*	0.352*	0.278*	0.394*	0.402*	0.372*
	(0.0372)	(0.0352)	(0.0353)	(0.0407)	(0.0662)	(0.0756)
Judge FE	No	Yes	Yes	No	Yes	Yes
Courthouse	Chicago	Chicago	Chicago	Chicago	Chicago	Chicago
Judge Race	White	White	White	Black	Black	Black
Observations	208217	208217	208217	61677	61677	61677

Standard errors in parentheses

⁺ $p < 0.10$, * $p < 0.05$

Table 7: Predicted probabilities of incarceration for cases with Black and White defendants heard by White judges at max. min. and interquartile values of the percent of Black judges on the bench, generated from interaction term in Column 3 of Table 6 (all other variables held at mean values).

% Blk Judges	Black Def.		White Def.	
	Prob. Inc	95% CI	Prob. Inc	95% CI
8.000	0.541	[0.509, 0.572]	0.352	[0.313, 0.390]
15.000	0.509	[0.501, 0.518]	0.358	[0.338, 0.378]
20.500	0.485	[0.471, 0.498]	0.363	[0.338, 0.388]
22.500	0.476	[0.456, 0.495]	0.365	[0.335, 0.395]

diversity among their colleagues. These results may be consistent with a theory where the pressures of tokenism alleviate for Black judges as they gain Black colleagues. They may also suggest that there is no relationship between Black judicial representation and Black judges' sentencing decisions, or that higher levels of racial diversity among colleagues are required for racial-minority-group members to alter their behavior in response to greater representation within their group of colleagues.

Judges' responses to Black judicial representation in their sentencing decisions are distinct from the role of time in decreasing judges' general punitiveness (see Appendix), and they are also distinct from any direct effect of a judge's race on their sentencing decisions. In fact, unlike racial diversity among judges, judges' racial identities, alone, have little impact on incarceration decisions. The following subsection attempts to provide additional clarity with respect to the mechanisms underlying the relationship between racial diversity among judges and sentencing.

Considering Mechanisms

The results presented so far provide evidence of a relationship between racial diversity among judges and criminal trial judges' sentencing decisions. The results presented in Table 4 also provide support for one of the expectations derived from the theory—the relationship between racial diversity among judges and sentencing decisions is only present

among judges who work in the same location as their colleagues whose presence increases racial diversity on the bench. This subsection sheds further light on the mechanisms that may underly this relationship.

The inclusion of judges' courtroom assignments in the data is helpful, because it allows me to identify where all judges in the Leighton Building are located in relation to one another.¹³ With respect to White judges' behavior, if pressure not to appear discriminatory, rather than updated beliefs or an increased awareness of the salience of race in the criminal legal system, is responsible for the observed relationship between Black judicial representation and sentencing, we should expect this relationship to be present/strongest in situations where White judges have no choice but to see (though not necessarily interact with) their Black colleagues on a regular basis.

I examine this possibility with an analysis of the relationship between the number of Black judges with courtrooms on each floor of the Leighton Building and White judges' decisions to render incarceration sentences. If White judges sentence more leniently as they gain Black floormates, especially if this relationship is stronger than the one uncovered between the courthouse-level measure of racial diversity and sentencing, it would suggest that White judges are updating their behavior due to pressure not to appear discriminatory in front of nearby colleagues who they might see often, but around whom they did not choose to be.

Table 8 presents the results from this analysis. In the first column, the coefficient on the number of Black judges on the floor where a case was heard is not statistically significant, suggesting that there is no relationship between the number of Black floormates White judges have and their sentencing decisions. However, the coefficient on the interaction term in the second column is positive and statistically significant, suggesting that White judges become more punitive in cases with Black defendants as they gain Black floormates. The results suggest that going from zero to three Black floormates increases the probability of an incarceration sentence by one percentage point. This is

¹³Staff from the Circuit Court of Cook County and the Cook County State's Attorney Office indicated that the courtroom associated with a case in the data should correspond to the physical courtroom in which a case was heard.

Table 8: Floor mates and sentencing- outcome is whether defendant was sentenced to incarceration. Standard errors clustered at judge level.

	Incarcerate	Incarcerate	Incarcerate
Num. Bl. Judges on Floor	0.00553 (0.00985)	-0.0123 (0.00981)	-0.00454 (0.00964)
Black Defendant	0.136* (0.0137)	0.116* (0.0161)	0.118* (0.0158)
Latino Def.	-0.00630 (0.00887)	-0.00846 (0.00881)	-0.00839 (0.00898)
Oth. Race Def.	-0.101* (0.0273)	-0.105* (0.0272)	-0.109* (0.0269)
Defendant Age	0.00267* (0.000313)	0.00265* (0.000313)	0.00264* (0.000312)
Female Defendant	-0.109* (0.00744)	-0.109* (0.00745)	-0.108* (0.00764)
Felony Class	0.00984* (0.00446)	0.00989* (0.00444)	0.00989* (0.00444)
Ret. Election	0.0000774 (0.0144)	-0.000256 (0.0143)	0.00526 (0.0148)
Year Trend	-0.00703* (0.00165)	-0.00699* (0.00165)	-0.00542* (0.00217)
Black Defendant × Num. Bl. Judges on Floor		0.0219* (0.00659)	0.0218* (0.00642)
Perecent Bl. Judges			-0.00384* (0.00185)
Constant	0.302* (0.0261)	0.317* (0.0270)	0.363* (0.0367)
Judge FE	Yes	Yes	Yes
Courthouse	Chicago	Chicago	Chicago
Judge Race	White	White	White
Observations	208217	208217	208217

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$

a large increase. However, the maximum number of Black floormates any White judge had throughout the study period is four, which reflects the situation in only six percent of the cases heard by White judges (nineteen percent of cases were heard by a White judge with three Black floormates), and the plurality of cases (43 percent) were heard by White judges who had zero Black floormates. There is no significant difference in the sentencing behavior of White judges who have zero to two Black floormates. Additionally, incorporating the number of White judges' Black floormates into models including the courthouse-level measure of racial diversity among judges does not dull the impact of this higher-level measure of racial diversity on White judges' decisions (as shown in Column 3 of Table 8).

The results in Table 8 provide some support for repeated positive contact or the increased salience of the role of race in the criminal legal system driving the relationship between racial diversity within a courthouse and judicial decision making. When White judges must see Black colleagues—regardless of their level of or desire for interaction with those colleagues—due to courtroom location, they become more likely to render incarceration sentences in cases with Black defendants. This only occurs when White judges have three or four Black floormates, which is relatively rare. Leighton's second and third floors have eight courtrooms, and the fourth through sixth floors have three to four courtrooms, meaning, for the most part, it is only possible for a White judge on the second or third floor to have that many Black floormates, and having three to four Black floormates would bring White judges very close to becoming a minority group on a floor. In fact, only one Black judge had a courtroom above the fourth floor throughout the entire study period.

On the other hand, as Black judges gain representation in the courthouse, White judges throughout the courthouse respond with more balanced sentencing. This could be because they have, and sometimes choose, the opportunity to interact with Black colleagues in a variety of ways that might be more positive overall.¹⁴ It is also possible

¹⁴Judges in Cook County, are assigned to judicial teams in which they receive communication from the presiding judge. These teams are another way that White judges might be exposed to and have repeated interactions with Black colleagues.

that, when it comes to White judges' behavior, racial diversity is best measured, as my argument suggests, as a higher-level contextual feature of an institution, regardless of the mechanism driving the relationship. Results from models that collapse the data into means of all the variables by judge and defendant race, support this interpretation, as well (see the appendix). An increase in the average representation of Black judges in the courthouse is associated with a decrease in incarceration sentences, while there is no association between sentencing and the average number of Black floor-mates judges have during their tenure on the bench.

A similar analysis of cases heard by Black judges does not yield statistically significant results. There are far fewer Black judges than White judges in Chicago throughout this period, and the vast majority of them have at least one Black floormate. As stated previously, only one Black judge had a courtroom on one of Leighton's top three floors during this period. This judge moved from a lower-level floor, where Black and White judges had courtrooms, to an upper-level floor where they became the only Black judge. I constructed a model of the change in this judge's behavior after the floor switch compared with how other judges' behavior changed at the same time.

Table 9 shows that when this judge went from racially diverse floor to an otherwise all-White floor, their behavior changed to become more punitive and more in line with the average behavior of the court's other judges. Prior to the floor switch, the probability of incarceration for cases assigned to this judge was 12 percentage points lower than the rest of the court, but after the floor switch the probability of incarceration for this judge's cases was 0.8 percentage points higher than those assigned to the court's other judges. This illustrative example, alone, is not definitive evidence for the alleviation of tokenism as the mechanism driving the relationship between racial diversity among judges and Black judges' sentencing behavior. However, it is consistent with the theory. We should expect Black judges' behavior to mirror White judges' most closely when Black judges are most underrepresented; and Black judges should feel less pressure to mirror White judges' behavior when they are better represented.

Table 9: Black judge becoming minority of one- outcome is whether defendant was sentenced to incarceration. Standard errors clustered at judge level.

	Incarcerate
Post Switch	-0.0464* (0.0197)
The Black Judge	-0.121 (0.0779)
Post Switch × The Black Judge	0.182* (0.0803)
Black Defendant	0.145* (0.00966)
Latino Def.	-0.00637 (0.00700)
Oth. Race Def.	-0.0682* (0.0226)
Defendant Age	0.00245* (0.000268)
Female Defendant	-0.112* (0.00654)
Felony Class	0.0128* (0.00416)
Ret. Election	0.00915 (0.0175)
Constant	0.240* (0.0215)
Judge FE	No
Courthouse	Chicago
Observations	315196

Standard errors in parentheses

+ $p < .10$, * $p < 0.05$

Discussion and Conclusion

Diversity with respect to background, ideology, gender, and race can greatly alter any environment, and the analyses presented above show that there is much at stake when considering racial diversity among trial court judges. First, the impact of such diversity extends beyond the behavior of any one judge whose identity might make the bench more racially diverse. Second, racial diversity among members of the judiciary has the potential to do more than instill a sense of institutional legitimacy among those most likely to appear in criminal courts as defendants (Scherer and Curry 2010); it may have the ability to impact the lives and freedom of individuals who interact with the institution directly and reduce incarceration. The results show that increasing the number of judges who look like the majority of defendants could increase the likelihood that defendants of different races receive more similar sentences and reduce incarceration. Finally, these findings have important implications for the struggle to address mass incarceration, disparate outcomes for non-White people throughout the carceral system, and demands for and implications of diversity (along multiple dimensions) within institutions.

This paper moves beyond previous scholarship evaluating the relationship between racial diversity among judges and judicial decision making by providing an individual judge-level analysis of this relationship, understanding that each judge's response will be different and conditioned by their own identity. Though the analyses cannot definitively determine the mechanisms, they do provide some support that positive, repeated contact with Black colleagues and/or the increased salience of racism in the criminal legal system drives White judges' responses to increases in racial diversity among their colleagues.

If social pressure to exhibit behavior that is acceptable to an increasingly diverse group drives White judges' behavior, then we might expect them to sentence more equitably only, or especially, when that diversity is most noticeable—when Black judges' have courtrooms nearby. In this situation, White judges may have no choice but to see Black colleagues frequently in the hallway, for example, and, therefore, be reminded that these colleagues are nearby and potentially observing them. The results of the floormate analysis do not suggest that this is the case. Rather, White judges appear to become more punitive toward Black defendants when they have many Black floormates. Re-

sults from the main analyses, however, support the idea that judges respond to racial diversity among colleagues at the courthouse level, suggesting that shifts in the racial identities represented on the judiciary alter the context in which judges work and how they approach their jobs. For White judges, this could be because, over time, as they are exposed to more Black colleagues and have the opportunity to interact with them, they either update their personally held beliefs about race or the role of racism in the criminal legal system becomes more salient to them. However, further disentangling the nuances of this relationship requires additional research. Observations of court operations could be especially helpful to identify how and where judges interact. It is possible that some interactions that cannot be measured with the type of data used here might create the type of social pressure that would lead White judges to alter their sentencing behavior. For example, on some courts, judges are assigned to teams in which they discuss the court's work and receive communication from the presiding judge. Interviews with judges and court staff may also illuminate how judges interact with their colleagues, the types of relationships they develop, and how those interactions and relationships influence their work.

This article presents evidence from analyses of state trial court data. State trial court judges handle the vast majority of felony cases in the U.S, and the factors most likely to contribute to the observed relationship between racial diversity among judges and sentencing are, by no means, unique to Cook County, Illinois. The theory and potential mechanisms underlying the relationship suggest that a similar relationship between racial (or ethnic) diversity among judges and greater equity in criminal sentencing could emerge in settings where there are large racial disparities in sentencing, and the racial group more frequently imprisoned is relatively underrepresented among the judiciary. These conditions are met in many places throughout the U.S., and analyses of data from Harris County, TX (included in the appendix) yield similar results to those reported here.

Black people are more frequently incarcerated than White people in every state in the U.S.¹⁵ The judiciary remains mostly White in every state except for Hawaii and

¹⁵According to 2016 data from The Sentencing Project and the U.S. Bureau of Justice Statistics: <https://www.sentencingproject.org/criminal-justice-facts/>

also the District of Columbia. The Black-White incarceration disparity will obviously vary within a state, as will Black judicial representation. However, counties where this disparity is greatest and where Black judges are more likely to have and seek seats are those where populations are usually most racially diverse. These might be counties that are more urban rather than rural, for example, and that tend to be more densely populated and have higher crime rates. Such a description applies to very many urban (and suburban) areas in the in the U.S.

Throughout this article, I have focused on the Black-White sentencing disparity and on Black and White judges, which deserve explicit attention considering Black Americans' increased likelihood of contact with all segments of the criminal legal system, and Black Americans' general lack of representation on the judiciary. But future research might consider the relationship between Latinx judicial representation and sentencing outcomes for Latinx defendants, especially in settings where there are disparities in sentencing between Latinx and White individuals, Latinx judges remain in the minority, and Latinx judges are likely to have and seek seats on the bench. The Latinx-White incarceration disparity is not as stark as the Black-White disparity, but Latinx individuals are still more frequently incarcerated than White individuals throughout the U.S. The three states with the largest Latinx-White incarceration disparities—New Mexico, Arizona, and Colorado—are also three of the states where Latinx judicial representation is greater than that for any other non-White group.¹⁶ These are prime examples of states with criminal courts that might produce results similar to those presented here, but for the sentencing of Latinx defendants.

Beyond what they suggest about judicial decision making and criminal legal outcomes, a major contribution of the findings is how they inform our conception of racial diversity in institutions. This paper reinforces the importance of acknowledging that diversity is a group-level characteristic, a definitionally and analytically important distinction. An individual cannot be “diverse,” and reducing evaluations of racial diversity

¹⁶According to 2016 data from The Sentencing Project and the U.S. Bureau of Justice Statistics: <https://www.sentencingproject.org/criminal-justice-facts/> and 2010 data from the American Bar Association: <http://apps.americanbar.org/abanet/jd/display/national.cfm>

to comparisons of non-White and White individuals' behavior reinforces the belief that White individuals' behavior represents an accepted baseline while failing to capture all the ways racial diversity might influence institutional outcomes. In fact, this paper shows that, in trial courts, racial diversity is most influential on White judges' behavior. These findings suggest a new focus for efforts to increase racial diversity in institutions, which have typically focused on inclusion and representation—the potential to shift institutional power balances and alter behavior among majority-group members.

References

- Abrams, David, Marianne Bertrand and Sendhil Mullainathan. 2012. "Do Judges Vary in Their Treatment of Race?" *Journal of Legal Studies* 41(2):347–383.
- Abrams, David, Roberto Galbiati, Emeric Henry and Arnaud Philippe. 2022. "When in Rome... on local norms and sentencing decisions." *Journal of the European Economic Association* 20(2):700–738.
- Allport, Gordon W. 1979. *The Nature of Prejudice*. Basic books.
- Antonio, Anthony Lising, Mitchell J Chang, Kenji Hakuta, David A Kenny, Shana Levin and Jeffrey F Milem. 2004. "Effects of racial diversity on complex thinking in college students." *Psychological science* 15(8):507–510.
- Asch, Solomon E. 1956. "Studies of Independence and Conformity: A Minority of One Against a Unanimous Majority." *Psychological Monographs: General and Applied* 70(9):1.
- Baumgartner, Frank R, Kate Bell, Luke Beyer, Tara Boldrin, Libby Doyle, Lindsey Govan, Jack Halpert, Jackson Hicks, Katherine Kyriakouides, Cat Lee et al. 2021. "Intersectional encounters, representative bureaucracy, and the routine traffic stop." *Policy Studies Journal* 49(3):860–886.
- Burch, Traci. 2013. *Trading Democracy for Justice: Criminal Convictions and the Decline of Neighborhood Political Participation*. University of Chicago Press.
- Carson, E. Ann. 2018. "Prisoners in 2016." *Bureau of Justice Statistics* NCJ 251149.
URL: <https://www.bjs.gov/content/pub/pdf/p16.pdf>
- Cohen, Alma and Crystal S Yang. 2019. "Judicial politics and sentencing decisions." *American Economic Journal: Economic Policy* 11(1):160–91.
- Cook, Alison and Christy Glass. 2015. "Do Minority Leaders Affect Corporate Practice? Analyzing the Effect of Leadership Composition on Governance and Product Development." *Strategic Organization* 13(2):117–140.

- Cox, Adam B and Thomas J Miles. 2008a. "Judging the Voting Rights Act." *Columbia Law Review* 108:1–54.
- Cox, Adam B and Thomas J Miles. 2008b. "Judicial Ideology and the Transformation of Voting Rights Jurisprudence." *University of Chicago Law Law Review* 75:1493–1540.
- Crime in the United States*. 2019. Technical report.
URL: <https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019>
- Eckhouse, Laurel. 2018. "Everyday Risk: Disparate Exposure and Racial Inequality in Police Violence." *Unpublished manuscript, University of Denver* .
- Eckhouse, Laurel. 2019a. "Descriptive Representation and Political Power: Explaining Racial Inequalities in Policing." .
- Eckhouse, Laurel. 2019b. "Race, Party, and Representation in Criminal Justice Politics." *The Journal of Politics* 81(3):000–000.
- Eisenstein, James, Roy B Flemming and Peter F Nardulli. 1988. *The contours of justice: Communities and their courts*. Little, Brown Boston, MA.
- Enos, Ryan D. 2014. "Causal Effect of Intergroup Contact on Exclusionary Attitudes." *Proceedings of the National Academy of Sciences* 111(10):3699–3704.
- Forbes, Hugh Donald. 1997. *Ethnic Conflict: Commerce, Culture, and the Contact Hypothesis*. Yale University Press.
- Greenwald, Anthony G, Mark A Oakes and Hunter G Hoffman. 2003. "Targets of discrimination: Effects of race on responses to weapons holders." *Journal of Experimental Social Psychology* 39(4):399–405.
- Hans, Valerie P and Neil Vidmar. 1982. "Jury selection." *The psychology of the courtroom* pp. 39–82.
- Harris, Allison P and Maya Sen. 2019. "Bias and judging." *Annual Review of Political Science* .

Hong, Sounman. 2017. "Does Increasing Ethnic Representativeness Reduce Police Misconduct?" *Public Administration Review* 77(2):195–205.

Illinois Courts. 2013.

URL: <http://www.illinoiscourts.gov/SupremeCourt/AnnualReport/2013/StatsSumm/default.asp>

Jehn, Karen A, Gregory B Northcraft and Margaret A Neale. 1999. "Why differences make a difference: A field study of diversity, conflict and performance in workgroups." *Administrative science quarterly* 44(4):741–763.

Kanter, Rosabeth Moss. 1977. *Men and Women of the Corporation*. Basic Books.

Kastellec, Jonathan P. 2013. "Racial Diversity and Judicial Influence on Appellate Courts." *American Journal of Political Science* 57(1):167–183.

Kennedy, Brandy A, Adam M Butz, Nazita Lajevardi and Matthew J Nanes. 2017. *Race and Representative Bureaucracy in American Policing*. Springer.

Legewie, Joscha and Jeffrey Fagan. 2016. "Group threat, police officer diversity and the deadly use of police force." *Columbia Public Law Research Paper* (14-512).

Lerman, Amy E and Vesla M Weaver. 2014. *Arresting Citizenship: The Democratic Consequences of American Crime Control*. University of Chicago Press.

Lim, Hong-Hai. 2006. "Representative Bureaucracy: Rethinking Substantive Effects and Active Representation." *Public administration review* 66(2):193–204.

Meier, Kenneth J. 1993. "Latinos and Representative Bureaucracy Resting the Thompson and Henderson Hypotheses." *Journal of Public Administration Research and Theory* 3(4):393–414.

Meier, Kenneth J. 2018. "Theoretical Frontiers in Representative Bureaucracy: New Directions for Research." *Perspectives on Public Management and Governance* pp. 1–18.

- Meier, Kenneth J, Robert D Wrinkle and Jerry L Polinard. 1999. "Representative Bureaucracy and Distributional Equity: Addressing the Hard Question." *The Journal of Politics* 61(4):1025–1039.
- Riccucci, Norma M and Gregg G Van Ryzin. 2017. "Representative Bureaucracy: A Lever to Enhance Social Equity, Coproduction, and Democracy." *Public Administration Review* 77(1):21–30.
- Riccucci, Norma M and Marcia K Meyers. 2004. "Linking Passive and Active Representation: The Case of Frontline Workers in Welfare Agencies." *Journal of Public Administration Research and Theory* 14(4):585–597.
- Sances, Michael W and Hye Young You. 2017. "Who pays for government? Descriptive representation and exploitative revenue sources." *The Journal of Politics* 79(3):1090–1094.
- Schanzenbach, Max. 2005. "Racial and Sex Disparities in Prison Sentences: The Effect of District-level Judicial Demographics." *The Journal of Legal Studies* 34(1):57–92.
- Scherer, Nancy. 2004. "Blacks on the Bench." *Political Science Quarterly* 119(4):655–675.
- Scherer, Nancy and Brett Curry. 2010. "Does Descriptive Race Representation Enhance Institutional Legitimacy? The Case of the U.S. Courts." *The Journal of Politics* 72(01):90–104.
- Selvanathan, Hema Preya, Pirathat Techakesari, Linda R Tropp and Fiona Kate Barlow. 2017. "Whites for Racial Justice: How Contact with Black Americans Predicts Support for Collective Action among White Americans." *Group Processes & Intergroup Relations* pp. 1–20.
- Sommers, Samuel R. 2006. "On Racial Diversity and Group Decision Making: Identifying Multiple Effects of Racial Composition on Jury Deliberations." *Journal of Personality and Social Psychology* 90(4):597.
- Spohn, Cassia. 1990. "The Sentencing Decisions of Black and White Judges: Expected and unexpected similarities." *Law and Society Review* pp. 1197–1216.

- Steffensmeier, Darrell and Chester L Britt. 2001. "Judges' Race and Judicial Decision Making: Do Black Judges Sentence Differently?" *Social Science Quarterly* 82(4):749–764.
- Ulmer, Jeffery T and Brian Johnson. 2004. "Sentencing in context: A multilevel analysis." *Criminology* 42(1):137–178.
- U.S. Federal Courts*. 2013.
URL: <http://www.uscourts.gov/statistics-reports/us-courts-appeals-judicial-business-2013>
- Walker, Hannah L. 2014. "Extending the Effects of the Carceral State: Proximal Contact, Political Participation, and Race." *Political Research Quarterly* 67(4):809–822.
- Walker, Hannah L and Marcela García-Castañón. 2017. "For Love and Justice: The Mobilizing of Race, Gender, and Criminal Justice Contact." *Politics & Gender* 13(4):541–568.
- Ward, Geoff, Amy Farrell and Danielle Rousseau. 2009. "Does racial balance in workforce representation yield equal justice? Race relations of sentencing in federal court organizations." *Law & Society Review* 43(4):757–806.
- Weaver, Vesla M and Amy E Lerman. 2010. "Political Consequences of the carceral state." *American Political Science Review* 104(4):817–833.
- Welch, Susan, Michael Combs and John Gruhl. 1988. "Do Black Judges Make a Difference?" *American Journal of Political Science* pp. 126–136.
- White, Ariel. N.d.a. "Family Matters? Voting Behavior in Households with Criminal Justice Contact."
URL: <https://arwhite.mit.edu/papers>
- White, Ariel. N.d.b. "Misdemeanor Disenfranchisement? The Demobilizing Effects of Brief Jail Spells on Potential Voters."
URL: <https://arwhite.mit.edu/papers>

Yoder, Janice D. 1991. "Rethinking Tokenism: Looking beyond Numbers." *Gender & Society* 5(2):178–192.