# Appendix: Can Racial Diversity Among Judges Affect Sentencing Outcomes?

Allison P. Harris\*

### A Data

The data from the Criminal Division of Cook County, IL included 1.4 million cases heard from 1984 through 2014 in which the defendant was *not* found not guilty, because the court does not release data for cases where the defendant is found not guilty (though there were some "not guilty" dispositions included in the data). I dropped all cases initiated after 2013, to allow enough time for a final disposition to be reached, and all cases initiated prior to 1995 when the court began randomly assigning cases to judges (Abrams, Bertrand and Mullainathan 2012). I also excluded cases associated with courtrooms in the Leighton Building that are reserved for special purposes, including the presiding judge's courtroom(101) ,and the grand jury room (405).

I drop all dismissed charges/cases from the data, since only the state can decide whether to dismiss a charge. A judge can only render sentencing decisions on cases/chargers with which the state proceeds. The vast majority of dismissals are chargers that are part of a case for which other charges were not dismissed. Analyses including dismissed cases are included below. The final dataset includes roughly 431,000 cases, 78 percent of which were heard in Chicago's Leighton courthouse. Figure A.1 presents the distribution of all felony cases by year, and Table A.1 presents the distribution of cases by defendant race.

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Figure A.1: Number of Felony Cases Initiated per Year in the Circuit Court of Cook County, Criminal Division

The data include a wide variety of offenses. In Illinois, judges' discretion with respect to sentencing is limited within the terms established by the Illinois General Assembly's "Penalties for Crimes in Illinois", the state's sentencing guidelines.<sup>1</sup> Judges decide whether to give a defendant a jail or prison term and, if so, for how long within the usual incarceration term for the class of the offense for which a defendant is convicted. Table A.2 shows the distribution of cases by charge class from most to least serious. The data includes felony charges–1-4–and misdemeanor charges–A-B. Probation instead of incarceration is allowable for all charges included in the analysis, and the usual prison and probation terms decrease as the seriousness of the felony decreases. I removed charges in the two most serious classes–Class M (murder) and Class X–from the analysis, because the sentencing guidelines do not allow for probation instead of incarceration for these most serious offenses.<sup>2</sup> However, results remain similar when Class X and M felonies are

 $<sup>^1 {\</sup>rm See: http://www.ilga.gov/commission/lru/2005 PFC.pdf}$  for details on felony classes and sentencing guidelines in Illinois.

<sup>&</sup>lt;sup>2</sup>There are cases coded as class X or M in the data for which the final disposition is something other than incarceration. It is unclear whether this is due to time served, judges departing from sentencing guidelines, or other factors that may not be clear in this type of dataset.

included in the analyses.

Defendant Race	Num. Cases	Percent
Black	326,121	75.54
White	48,419	11.22
Latino/Hispanic	52,164	12.08
Other	1,448	0.34
Not Known	3,563	0.83
Total	431,715	100.00

Table A.1: Distribution of Cases by Defendant Race

Table A.2: Distribution of Cases by Charge Class from Most to Least Serious

Class	Num. Cases	Percent
1	57,840	13.40
2	110,422	25.58
3	70,518	16.33
4	181,647	42.08
А	9,410	2.18
В	322	0.07
С	260	0.06
Not Known	1,296	0.30
Total	431,715	100.00

### A.1 Judges of the Circuit Court of Cook County

The Clerk of the Circuit Court of Cook County included the number of the courtroom to which each case was assigned and the name of the judge rendering the sentence in each case. Floating judges fill in for the permanent judges when permanent judges are unable to come to work and sometimes render the final dispositions in cases. Regardless of whether a floating judge happens to render the sentence in a given case one day, the permanent judge is the regular colleague in the courthouse and the regular judge in a given courtroom. To distinguish permanent from floating judges, I identify the judge deciding cases most frequently in each courtroom. Table A.3 shows the distribution of race and gender among permanent Criminal Division judges. The vast majority of judges are male and White.

Judge Race	Percent
Black	15.39
Hispanic/Latino	2.21
White	64.94
Not Known	17.46
Total	100.00
Gender	Percent
Female	14.19
Male	77.70
Not Known	8.11
Total	100.00

Table A.3: Characteristics of Criminal Division Judges

### **B** Dismissed Cases

The data used for the analyses presented in the manuscript do not include dismissed charges, since only the state can decide to drop charges and judges can only make sentencing decision on charges that proceed to conviction. Results from a model similar to the one presented in Column 3 of Table 6 in the manuscript, using data that include dismissed charges, are included in Table B.1. These results also suggest that increases in racial diversity on the bench decrease disparities in incarceration sentences. However, it is because of increased punitiveness in cases with White defendants and a slight decrease in punitiveness in cases with Black defendants.

	(1)
	Incarcerate
Perecent Bl. Judges	$0.00331^{*}$
	(0.000932)
Black Defendant	$0.185^{*}$
	(0.0145)
	*
Black Defendant $\times$ Perecent Bl. Judges	-0.00383*
	(0.000827)
Latin Def	0.00244
Latino Der.	-0.00344
	(0.00500)
Oth Bace Def	-0.0687*
Oth. Race Del.	(0.0158)
	(0.0138)
Defendant Age	0.00229*
Detendant rige	(0.000154)
	(0.000134)
Female Defendant	-0.0653*
	(0.00460)
	()
Offense Class	-0.0210*
	(0.00514)
	()
Ret. Election	-0.0129
	(0.00796)
Year Trend	$-0.0138^*$
	(0.00106)
Constant	$0.327^{*}$
	(0.0314)
R-Squared	0.0282
Judge FE	Yes
Courthouse	Chicago
Observations	497102
Judge-level clustered standard errors in p	arentheses.
Outcome is incarceration sentence $(1,0)$ .	

Table B.1: Racial Diversity and Incarceration (Including Dismissed Charges)

+ p < 0.10, \* p < 0.05

#### $\mathbf{C}$ Measuring Black Judicial Representation

The models in the manuscript incorporate annual measures of racial diversity among judges. In this appendix I present results from an analysis using a monthly measure. The figures below show the distributions of the annual and monthly measures.



Figure C.1: Percent of Criminal Division Judges Who are Black and White, Annually



Figure C.2: Percent of Criminal Division Judges Who are Black and White, Monthly

### D Fixed Effects v. Random Effects

Table D.1 includes results from a model with judge random effects, rather than fixed effects. Because the measure of racial diversity among judges does not vary within a year, there will be little within-unit variation for any judges who only appear in the data for a short period of time, including judges who retired shortly after 1995, for example. Random effects models may be preferable in such situations.<sup>3</sup> Table D.1 suggests that the overall results are consistent across random effects and fixed effects specifications. However, random effects models allow for the inclusion of unit-level measures, so these models include indicators for judge race and ethnicity. The inclusion of these measures does not dull the relationship between Black judicial representation and incarceration sentences in cases with Black defendants.

 $<sup>^{3}</sup>$ When assessing the effects of variables with little within-unit variation, especially when there is minimal correlation between the variable and unit effects, random effects models are often recommended (Clark and Linzer 2015). Correlation between unit effects and the main independent variable are around 0.05.

Perecent Bl. Judges         -0.0000181 (0.00190)           Black Defendant         0.204* (0.0242)           Black Defendant × Perecent Bl. Judges         -0.00448* (0.00157)           White Judge         0.0428 <sup>+</sup>
$\begin{array}{c} (0.00190) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
Black Defendant $0.204^*$ ( $0.0242$ )Black Defendant × Perecent Bl. Judges $-0.00448^*$ ( $0.00157$ )White Judge $0.0428^+$
Black Defendant $\times$ Perecent Bl. Judges $-0.00448^*$ (0.0242) Black Defendant $\times$ Perecent Bl. Judges $-0.00448^*$ (0.00157) White Judge $0.0428^+$
Black Defendant × Perecent Bl. Judges -0.00448* (0.00157) White Judge 0.0428 <sup>+</sup>
Black Defendant $\times$ Perecent Bl. Judges -0.00448* (0.00157) White Judge 0.0428 <sup>+</sup>
(0.00157) White Judge 0.0428 <sup>+</sup>
White Judge 0.0428 <sup>+</sup>
(0.0249)
(0.02-0)
Latinx Judge 0.0597*
(0.0244)
Latino Def0.0120 <sup>+</sup>
(0.00687)
()
Oth. Race Def0.0994*
(0.0238)
Defendant Age 0.00325*
(0.000297)
Female Defendant -0.112*
(0.00789)
Offense Class 0.0114*
(0.00394)
Ret. Election -0.00393
(0.0150)
C.D. Judge in Prev. Year 0.0646*
(0.0158)
Year Trend -0.00630*
(0.00174)
Constant 0.229*
(0.0408)
Judge RE Yes
Courthouse Chicago
Observations 231468

Table D.1: Random effects Model of Racial Diversity and Incarceration

Judge-level clustered standard errors in parentheses.

Outcome is incarceration sentence (1,0).

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

# E Gender Diversity among Judges and Descriptive Representation and Sentencing

Table E.1 includes results from a fixed effects model of the relationship between gender diversity (measured as the percent of the Chicago-based Criminal Division judges who are women) and judges' decisions to render incarceration sentences. The first column shows that there is not a statistically significant relationship between women judges' representation and judges' sentencing decisions, nor is there a relationship moderated by defendant gender (second column). The well-documented racial disparities throughout the carceral system along with the role that race has played in its history make the racial identities represented within that system particularly salient and distinct from the potential effects of other types of identity-based diversity. However, it is possible that gender diversity might work similarly in institutions where gender is especially salient, including those providing social services directed toward women and children.

Table E.1: Gender I	Diversity and	Incarceration
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	Incarcerate	Incarcerte
Percent Fem. J.	-0.00184	-0.00190
	(0.00146)	(0.00150)
Female Defendant	$-0.116^{*}$	$-0.120^{*}$
	(0.00632)	(0.0116)
Black Defendant	$0.140^{*}$	$0.140^{*}$
	(0.0102)	(0.0102)
Latino Def.	-0.00248	-0.00249
	(0.00672)	(0.00672)
	0.0010*	0.001.1*
Oth. Race Def.	-0.0943*	-0.0944
	(0.0217)	(0.0217)
Defendant Age	0.00201*	0.00201*
Defendant Age	(0.00301)	(0.000016)
	(0.000240)	(0.000240)
Offense Class	0.0108*	0.0108*
ononoo onabo	(0.00380)	(0.00380)
	(0.00000)	(0.00000)
Ret. Election	-0.00530	-0.00530
	(0.0101)	(0.0101)
	· · · ·	· · · ·
Year Trend	$-0.00545^{*}$	-0.00545*
	(0.00206)	(0.00206)
Female Defendant $\times$ Percent Fem. J.		0.000422
		(0.00101)
Constant	$0.294^{*}$	$0.295^{*}$
	(0.0201)	(0.0203)
R-Squared	0.0258	0.0258
Judge FE	Yes	Yes
Courtnouse	Chicago	Chicago
I III CARLONE	370987	3 7 U U A 8 7

Judge-level clustered standard errors in parentheses. Outcome is incarceration sentence (1,0).

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

Table E.2 presents results from a model that includes judge race interacted with defendant race and excludes the measure of racial diversity among judges. The results of this model, which does not include judge fixed effects, suggest that while judge race does appear to be related to incarceration decisions in some models, the impact of a judge's race on incarceration does not vary with the defendant's race. This provides further evidence that the influence of racial diversity among judges is distinct from any judge's racial identity.

	Incarcerate
Black Defendant	$0.131^{*}$
	(0.0115)
White Judge	$0.0459^{*}$
	(0.0210)
Black Defendant $\times$ White Judge	0.0154
	(0.0151)
Latino Def.	-0.0101
	(0.00891)

Table ion

	mearcorate
Black Defendant	0.131*
	(0.0115)
White Judge	$0.0459^{*}$
	(0.0210)
Plack Defendent V White Judge	0.0154
Black Defendant X white Judge	(0.0154)
	(0.0101)
Latino Def.	-0.0101
	(0.00891)
Oth. Race Def.	-0.0972*
	(0.0281)
Defendant Age	$0.00355^{*}$
Detendent Tige	(0.000378)
	· · · ·
Female Defendant	-0.119*
	(0.00906)
Latinx Judge	$0.0635^{*}$
	(0.0211)
Female Judge	0.00650
	(0.0319)
Dem. Judge	0.0211
-	(0.0226)
C.D. Judge in Prev. Vear	0.0346+
0.D. sudge in Frev. Tear	(0.0174)
Offense Class	0.00841+
	(0.00502)
Ret. Election	-0.0103
	(0.0157)
Year Trend	-0.00718*
	(0.00183)
	0.004*
Constant	(0.0390)
R-Squared	0.0323
Judge FE	No
Courthouse	Chicago
Observations	179380

Judge-level clustered standard errors in parentheses. Outcome is incarceration sentence (1,0).

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

# F Measuring Court Context: Annual v. Monthly Measures of Diversity and Permanent Judges

The results presented in the manuscript were all derived from models that include annual measures of the the percent of judges who are Black on the bench. Even with the inclusion of a year trend, a measure that only varies from year to year is not ideal. Table F.1 replicates the model from the third column of Table 5 in the manuscript, but it includes a monthly (rather than annual measure) of racial diversity and includes year fixed effects rather than a year trend.

I rely on annual measures of racial diversity among judges in the manuscript because it is possible that monthly fluctuations in racial diversity among judges do not reflect real changes in the composition of the bench and, instead, capture minor temporary shifts on the bench, such as floating judges filling in for permanent judges during absences, for example. However, it is also possible that these temporary shifts can alter the context in which all judges work. The general results generated from this model match those in the manuscript–as racial diversity among judges increases the racial gap in incarceration sentences decreases. However, in models constructed with a monthly measure of racial diversity among judges this is because judges become less punitive in cases with Black defendants **and** more punitive in cases with White defendants. I present results from models using the annual measure in the manuscript, because annual shifts in racial diversity among judges are likely more reflective of the actual context within the court and because the results are somewhat more modest.

Table F.1: Racial Diversity (measured monthly) and Sentencing

	Incarcerate
Perecent Bl. Judges	$0.00361^{*}$
	(0.00117)
Black Defendant	$0.215^{*}$
	(0.0170)
Black Defendant $\times$ Perecent Bl. Judges	-0.00430*
	(0.00113)
Latino Def.	0.0103+
	(0.00535)
Oth. Race Def.	-0.0918*
	(0.0206)
Defendant Age	$0.00301^{*}$
	(0.000232)
Female Defendant	-0.114*
	(0.00628)
Offense Class	0.0103*
	(0.00364)
Ret. Election	0.0167
	(0.0108)
Constant	0.220*
	(0.0266)
R-Squred	0.0299
Judge FE and Year FE	Yes
Courthouse	
Observations	320982

Standard errors in parentheses.

Outcome is incarceration sentence (1,0).

+ p < 0.10, \* p < 0.05

## G Incarceration and the Passing of Time

The analyses in the manuscript show a decreasing Black-White incarceration gap as Black judicial representation increases. This relationship is robust to various model specifications, including controlling for time with a year trend. However, the year trend is negative and significant in the models, suggesting that judges are becoming less punitive over time, and it may be possible that Black and White defendants are differently impacted by the trend of decreasing punitiveness. If that is the case, the coefficient on annual measure of racial diversity among judges may be capturing a growing trend among judges becoming more lenient toward Black defendants (perhaps as disparities in the criminal legal system continue to be publicized) rather than a relationship between racial diversity among

#### judges and sentencing

	Incarcerate
Perecent Bl. Judges	-0.000221
	(0.00232)
Black Defendant	$0.218^{*}$
	(0.0268)
Black Defendant $\times$ Perecent Bl. Judges	-0.00486*
	(0.00191)
Year Trend	-0.0122*
	(0.00426)
Perecent Bl. Judges $\times$ Year Trend	0.000347
	(0.000253)
Black Defendant $\times$ Year Trend	-0.000342
	(0.00362)
Black Defendant $\times$ Per ecent Bl. Judges $\times$ Year Trend	0.0000572
	(0.000230)
Latino Def.	-0.000443
	(0.00643)
Oth. Race Def.	-0.0880*
	(0.0213)
Defendant Age	0.00303*
	(0.000247)
Female Defendant	-0.115*
	(0.00634)
Offense Class	0.0108*
	(0.00380)
Ret. Election	-0.00160
	(0.0107)
Constant	$0.282^{*}$
	(0.0390)
R-Squared	0.0263
Judge FE	Yes
Courthouse	Chicago
Observations	320982

Table G.1: Racial Diversity v. Passing of Time

Standard errors in parentheses.

Outcome is incarceration sentence (1,0).

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

Table G.1 includes results from a model that includes a three-way interaction term between the year trend, the measure of racial diversity on the bench, and the indicator for whether the defendant in a case is Black. These results suggest that, while the impact of racial diversity among judges on sentencing varies with a defendants' race, the impact of the passing of time on sentencing does not vary with defendants' race.

## H Measuring Defendants' Previous Charges

The data Cook County provided did not include information about defendants' previous charges. I constructed a measure by creating an indicator for whether a given defendant had previously appeared in the data. This is not an ideal solution since it means that some defendants appearing in the data (especially in the early period) may have previous charges that precede the beginning of the dataset. Constructing the measure in this way is also concerning considering the overall downward trend in incarceration sentences over time. However, Table H.1 presents results incorporating this measure.

Table H.1: Racial Diversity and Sentencing, Incorporating Previous Char	ges
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	Incarcerate
Perecent Bl. Judges	0.000800
	(0.00137)
	0.000*
Black Defendant	0.203*
	(0.0177)
Black Defendant $\times$ Perecent Bl. Judges	-0.00588*
	(0.00114)
Latino Def.	-0.00789
	(0.00642)
Oth. Race Def.	-0.0809*
	(0.0210)
	()
Defendant Age	$0.00242^{*}$
	(0.000206)
Female Defendant	-0.0895*
	(0.00579)
	(0.00010)
Offense Class	$0.00672^{+}$
	(0.00365)
Pot Floation	0.00151
Ret. Election	-0.00131
	(0.0100)
Previous Charge	$0.213^{*}$
	(0.00828)
N T I	0.0104*
Year Irend	-0.0104*
	(0.00171)
Constant	$0.290^{*}$
	(0.0278)
R-Squared	0.0646
Judge FE	Yes
Courthouse	Chicago
Observations	320982

Judge-level clustered standard errors in parentheses.

Outcome is incarceration sentence (1,0).

+ p < 0.10, \* p < 0.05

The main results here are similar to those presented in the manuscript, but stronger, potentially due to the time-dependent nature of how the previous charge variable was calculated.

## I Number v. Proportion of Black Judges

Throughout the manuscript, I measure racial diversity among judges (Black judicial representation) as a percentage. It is also possible to measure this concept as the number of Black judges on the bench, and there could be circumstances in which this might be a more meaningful measure. If, for example, a criminal court were to double in size, but the proportions of Black and White judges remained the same, the individual judges of the court would still have more opportunities to see and interact with Black judges each day. Though such swift growth within a court is unlikely, it suggests that it is important to assess whether judges' reactions to the number of Black colleagues they have is similar to their reactions to the proportion of Black judges within their group of colleagues. Table I.1 shows results from a model that measures racial diversity among judges as the number of Black judges on the bench. Table I.1: Number of Black Judges and Sentencing

Incarcerate           Number of Black Judges         0.00456 (0.00346)           Black Defendant         0.213* (0.0172)           Black Defendant × Number of Black Judges         -0.0108* (0.00301)           Latino Def.         -0.00157 (0.00660)           Oth. Race Def.         -0.0857* (0.0214)           Defendant Age         0.00303* (0.00246)           Female Defendant         -0.116* (0.00640)           Offense Class         0.0107* (0.00382)           Ret. Election         -0.00647* (0.00172)           Vear Trend         0.252* (0.0275)           R-Squared         0.0261 Yes           Judge FE         Yes           Courthouse         Chicago           Observations         320982		
Number of Black Judges         0.00456 (0.00346)           Black Defendant         0.213* (0.0172)           Black Defendant × Number of Black Judges         -0.0108* (0.00301)           Latino Def.         -0.00157 (0.00660)           Oth. Race Def.         -0.0857* (0.0214)           Defendant Age         0.00303* (0.00246)           Female Defendant         -0.116* (0.00640)           Offense Class         0.0107* (0.00382)           Ret. Election         -0.00221 (0.018)           Year Trend         -0.00647* (0.0275)           R-Squared         0.0261           Judge FE         Yes           Courthouse         Chicago           Observations         320982		Incarcerate
$ \begin{array}{c} (0.00346) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	Number of Black Judges	0.00456
Black Defendant       0.213*         Black Defendant × Number of Black Judges       -0.0108*         Black Defendant × Number of Black Judges       -0.00157         Courthouse       -0.00157         (0.00600)       0         Defendant Age       -0.0857*         Offense Def.       -0.0837*         (0.00246)       -0.00030*         Female Defendant       -0.116*         (0.00246)       0.00302*         Offense Class       0.0107*         (0.00382)       0.0107*         Ret. Election       -0.00647*         (0.00172)       0.00172)         Constant       0.252*         Judge FE       Yes         Courthouse       Chicago         Observations       320982		(0.00346)
Black Defendant $0.213^{*}$ (0.0172)         Black Defendant × Number of Black Judges $-0.0108^{*}$ (0.00301)         Latino Def. $-0.00157$ (0.00660)         Oth. Race Def. $-0.0857^{*}$ (0.0214)         Defendant Age $0.00303^{*}$ (0.00246)         Female Defendant $-0.116^{*}$ (0.00640)         Offense Class $0.0107^{*}$ (0.00382)         Ret. Election $-0.00221$ (0.0108)         Year Trend $-0.00647^{*}$ (0.00172)         Constant $0.252^{*}$ (0.0275)         R-Squared $0.0261$ Judge FE Yes         Courthouse       Chicago Observations		*
(0.0172)         Black Defendant × Number of Black Judges $-0.0108^*$ (0.00301)         Latino Def. $-0.00157$ (0.00660)         Oth. Race Def. $-0.0857^*$ (0.0214)         Defendant Age $0.00303^*$ (0.000246)         Female Defendant $-0.116^*$ (0.00640)         Offense Class $0.0107^*$ (0.00382)         Ret. Election $-0.00221$ (0.0108)         Year Trend $-0.00647^*$ (0.00172)       Constant         0.252*       (0.0275)         R-Squared $0.0261$ Judge FE       Yes         Courthouse       Chicago         Observations       320982	Black Defendant	0.213~
Black Defendant × Number of Black Judges $-0.0108^*$ (0.00301)Latino Def. $-0.00157$ (0.00660)Oth. Race Def. $-0.0857^*$ (0.0214)Defendant Age $0.00303^*$ (0.000246)Female Defendant $-0.116^*$ (0.00640)Offense Class $0.0107^*$ (0.00382)Ret. Election $-0.00221$ (0.0108)Year Trend $-0.00647^*$ (0.00172)Constant $0.252^*$ (0.0275)R-Squared $0.0261$ Yes CourthouseObservations $320982$		(0.0172)
(0.00301)         Latino Def.       -0.00157         (0.00660)         Oth. Race Def.       -0.0857*         (0.0214)         Defendant Age       0.00303*         (0.000246)         Female Defendant       -0.116*         (0.00640)         Offense Class       0.0107*         (0.00382)         Ret. Election       -0.00221         (0.0108)         Year Trend       -0.00647*         (0.0275)       R-Squared         Judge FE       Yes         Courthouse       Chicago         Observations       320982	Black Defendant × Number of Black Judges	-0.0108*
Latino Def.       -0.00157         (0.00660)       Oth. Race Def.         Oth. Race Def.       -0.0857*         (0.0214)       Defendant Age         Defendant Age       0.00303*         (0.000246)       Female Defendant         Female Defendant       -0.116*         (0.00640)       Offense Class         Offense Class       0.0107*         (0.00382)       Ret. Election         Year Trend       -0.00221         (0.00172)       Constant         0.252*       (0.0275)         R-Squared       0.0261         Judge FE       Yes         Courthouse       Chicago         Observations       320982		(0, 00301)
Latino Def.       -0.00157         (0.00660)         Oth. Race Def.       -0.0857*         (0.0214)         Defendant Age       0.00303*         (0.000246)         Female Defendant       -0.116*         (0.00640)         Offense Class       0.0107*         (0.00382)         Ret. Election       -0.00221         (0.0108)         Year Trend       -0.00647*         (0.00172)         Constant       0.252*         (0.0275)       R-Squared         Judge FE       Yes         Courthouse       Chicago         Observations       320982		(0.00001)
(0.00660)         Oth. Race Def.       -0.0857*         (0.0214)         Defendant Age       0.00303*         (0.000246)         Female Defendant       -0.116*         (0.00640)         Offense Class       0.0107*         (0.00382)         Ret. Election       -0.00221         (0.0108)         Year Trend       -0.00647*         (0.00172)         Constant       0.252*         (0.0275)       R-Squared         Judge FE       Yes         Courthouse       Chicago         Observations       320982	Latino Def.	-0.00157
Oth. Race Def.       -0.0857* (0.0214)         Defendant Age       0.00303* (0.000246)         Female Defendant       -0.116* (0.00640)         Offense Class       0.0107* (0.00382)         Ret. Election       -0.00221 (0.0108)         Year Trend       -0.00647* (0.00172)         Constant       0.252* (0.0275)         R-Squared       0.0261 Judge FE         Judge FE       Yes         Courthouse       Chicago         Observations       320982		(0.00660)
Oth. Race Def. $-0.0857^*$ (0.0214)         Defendant Age $0.00303^*$ (0.000246)         Female Defendant $-0.116^*$ (0.00640)         Offense Class $0.0107^*$ (0.00382)         Ret. Election $-0.00221$ (0.0108)         Year Trend $-0.00647^*$ (0.00172)         Constant $0.252^*$ (0.0275)         R-Squared $0.0261$ Judge FE       Yes         Courthouse       Chicago         Observations $320982$		
(0.0214)           Defendant Age         0.00303*           (0.00246)           Female Defendant         -0.116*           (0.00640)           Offense Class         0.0107*           (0.00382)           Ret. Election         -0.00221           (0.0108)           Year Trend         -0.00647*           (0.00172)           Constant         0.252*           (0.0275)         R-Squared           Judge FE         Yes           Courthouse         Chicago           Observations         320982	Oth. Race Def.	-0.0857*
Defendant Age         0.00303* (0.000246)           Female Defendant         -0.116* (0.00640)           Offense Class         0.0107* (0.00382)           Ret. Election         -0.00221 (0.0108)           Year Trend         -0.00647* (0.00172)           Constant         0.252* (0.0275)           R-Squared         0.0261           Judge FE         Yes           Courthouse         Chicago           Observations         320982		(0.0214)
Female Defendant         -0.116*           (0.000246)           Female Defendant         -0.116*           (0.00640)           Offense Class         0.0107*           (0.00382)           Ret. Election         -0.00221           (0.0108)           Year Trend         -0.00647*           (0.00172)           Constant         0.252*           (0.0275)         R-Squared           Judge FE         Yes           Courthouse         Chicago           Observations         320982	Defendant Age	0.00303*
Female Defendant         -0.116*           (0.00640)         0           Offense Class         0.0107*           (0.00382)         (0.00382)           Ret. Election         -0.00221           (0.0108)         (0.0108)           Year Trend         -0.00647*           (0.00172)         Constant           0.252*         (0.0275)           R-Squared         0.0261           Judge FE         Yes           Courthouse         Chicago           Observations         320982	8-	(0, 000246)
Female Defendant         -0.116*           (0.00640)         (0.00640)           Offense Class         0.0107*           (0.00382)         (0.00382)           Ret. Election         -0.00221           (0.0108)         (0.0108)           Year Trend         -0.00647*           (0.00172)         (0.00172)           Constant         0.252*           (0.0275)         R-Squared           Judge FE         Yes           Courthouse         Chicago           Observations         320982		(0.000210)
(0.00640) Offense Class 0.0107* (0.00382) Ret. Election -0.00221 (0.0108) Year Trend -0.00647* (0.00172) Constant 0.252* (0.0275) R-Squared 0.0261 Judge FE Yes Courthouse Chicago Observations 320982	Female Defendant	-0.116*
Offense Class         0.0107* (0.00382)           Ret. Election         -0.00221 (0.0108)           Year Trend         -0.00647* (0.00172)           Constant         0.252* (0.0275)           R-Squared         0.0261           Judge FE         Yes           Courthouse         Chicago           Observations         320982		(0.00640)
Offense Class         0.0107*           (0.00382)         (0.00382)           Ret. Election         -0.00221           (0.0108)         (0.0108)           Year Trend         -0.00647*           (0.00172)         (0.00172)           Constant         0.252*           (0.0275)         R-Squared           Judge FE         Yes           Courthouse         Chicago           Observations         320982		
(0.00382) Ret. Election -0.00221 (0.0108) Year Trend -0.00647* (0.00172) Constant 0.252* (0.0275) R-Squared 0.0261 Judge FE Yes Courthouse Chicago Observations 320982	Offense Class	0.0107*
Ret. Election       -0.00221 (0.0108)         Year Trend       -0.00647* (0.00172)         Constant       0.252* (0.0275)         R-Squared       0.0261         Judge FE       Yes         Courthouse       Chicago         Observations       320982		(0.00382)
(0.0108) Year Trend -0.00647* (0.00172) Constant 0.252* (0.0275) R-Squared 0.0261 Judge FE Yes Courthouse Chicago Observations 320982	Ret. Election	-0.00221
Year Trend Year Trend Constant R-Squared Judge FE Courthouse Observations Constant Const		(0.0108)
Year Trend-0.00647* (0.00172)Constant0.252* (0.0275)R-Squared0.0261Judge FEYesCourthouseChicagoObservations320982		(0.0100)
(0.00172) Constant 0.252* (0.0275) R-Squared 0.0261 Judge FE Yes Courthouse Chicago Observations 320982	Year Trend	-0.00647*
Constant $0.252^*$ (0.0275)R-Squared $0.0261$ Judge FEYesCourthouseChicagoObservations $320982$		(0.00172)
Constant0.252*(0.0275)R-SquaredJudge FEYesCourthouseObservations320982	-	
(0.0275)R-Squared0.0261Judge FEYesCourthouseChicagoObservations320982	Constant	0.252*
R-Squared0.0261Judge FEYesCourthouseChicagoObservations320982		(0.0275)
Judge FEYesCourthouseChicagoObservations320982	R-Squared	0.0261
CourthouseChicagoObservations320982	Judge FE	Yes
Observations 320982	Courthouse	Chicago
	Observations	320982

Judge-level clustered standard errors in parentheses.

Outcome is incarceration sentence (1,0).

+ p < 0.10, \* p < 0.05

# J Courtroom Floor: Investigation of a Potential Mechanism

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.<sup>4</sup> 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

<sup>&</sup>lt;sup>4</sup>Staff 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.

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.

	Incarcerate	Incarcerate	Incarcerat
Num. Bl. Judges on Floor	0.00639	-0.0115	0.0136
	(0.00867)	(0.00911)	(0.00906)
Black Defendant	$0.137^{*}$	$0.119^{*}$	$0.226^{*}$
	(0.0137)	(0.0159)	(0.0217)
Latino Def.	-0.00378	-0.00569	-0.00282
	(0.00847)	(0.00842)	(0.00846)
Oth. Race Def.	-0.102*	-0.106*	-0.0944*
	(0.0274)	(0.0273)	(0.0273)
Defendant Age	0.00284*	$0.00282^{*}$	0.00286*
	(0.000321)	(0.000321)	(0.000318
Female Defendant	-0.110*	-0.110*	-0.110*
	(0.00749)	(0.00749)	(0.00771)
Offense Class	0.00982*	0.00988*	0.00971*
	(0.00444)	(0.00442)	(0.00444)
Ret. Election	-0.00430	-0.00463	0.00124
	(0.0125)	(0.0124)	(0.0129)
Year Trend	-0.00666*	-0.00663*	-0.00578*
	(0.00171)	(0.00171)	(0.00207)
Black Defendant $\times$ Num. Bl. Judges on Floor		$0.0218^{*}$	
		(0.00678)	
Perecent Bl. Judges			0.00111
			(0.00186)
Black Defendant $\times$ Perecent Bl. Judges			-0.00524*
			(0.00159)
Constant	0.289*	$0.303^{*}$	$0.256^{*}$
	(0.0257)	(0.0267)	(0.0350)
R-Squared	0.0246	0.0251	0.0255
Judge FE	Yes	Yes	Yes
Courthouse	Chicago	Chicago	Chicago
Judge Race	White	White	White
Observations	212211	212211	212211

Table J.1:	Black	Floor	Mates	and	Sentencing
10010 0111	Diacon	1 1001	1110000	correct	bouround

Judge-level clustered standard errors in parentheses.

Outcome is incarceration sentence (1,0).

+ p < 0.10, \* p < 0.05

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 floor mates, 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 J.1 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 their is no relationship between the number of Black floor mates 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 floor mates. The third column of Table J.1 shows that the main results presented in the manuscript remain unchanged when controlling for the number of Black floor mates a judge has–as the bench, as a whole, becomes more racially diverse, White judges become less punitive toward Black defendants.

The results in Table J.1 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. 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. It is also possible 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.

## K Becoming a "Minority of One"

Only one Black judge had a courtroom on one of Leighton's otherwise all-White 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.

	Incorrecto
	a o di 5*
After Floor Switch	-0.0415*
	(0.0205)
Index Min. of One	0.112
Judge Min. of One	-0.115
	(0.0761)
After Floor Switch × Judge Min. of One	0.174*
The Tiber Switch A stage min of the	(0.0786)
	(0.0780)
Black Defendant	$0.148^{*}$
	(0.00959)
	(0.00505)
Latino Def.	-0.00149
	(0.00693)
	· · · ·
Oth. Race Def.	$-0.0706^{*}$
	(0.0226)
Defendant Age	$0.00287^{*}$
	(0.000266)
Female Defendant	-0.113*
	(0.00653)
Offense Class	$0.0122^{*}$
	(0.00421)
Ret. Election	0.00787
	(0.0167)
Constant	0.225*
Constant	0.220
	(0.0228)
R-Squared	0.0249
Judge FE	No
Courthouse	Chicago
Observations	320982

Judge-level clustered standard errors in parentheses. Outcome is incarceration sentence (1,0).

+ p < .10, \* p < 0.05

Table K.1 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. 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 Back judges' sentencing behavior. However, it is consistent with that theory.

## L Harris County, TX

Analyses of similar felony case data from Harris County, TX yield similar results to those included in the main manuscript. As the proportion of Black judges on the bench increases, sentencing becomes more equitable. Black and White judges become less punitive toward Black defendants as they gain Black colleagues in Harris County, TX.

	Incarcerate	harris2	harris3
Perecent Bl. Judges	-0.000140	-0.000689	-0.000285
	(0.000374)	(0.00139)	(0.000476)
Black Defendant	$0.104^{*}$	$0.0962^{*}$	$0.103^{*}$
	(0.00258)	(0.0118)	(0.00281)
Black Defendant $\times$ Perecent Bl. Judges	-0.00331*	$-0.00288^*$	$-0.00305^{*}$
	(0.000211)	(0.000653)	(0.000260)
Oth. Race Def.	$-0.119^*$	$-0.0896^{*}$	$-0.114^{*}$
	(0.00744)	(0.0153)	(0.00990)
Defendant Age	$0.00123^{*}$	$0.00222^{*}$	$0.00123^{*}$
	(0.000215)	(0.000552)	(0.000244)
Female Defendant	$-0.120^{*}$	$-0.131^{*}$	$-0.120^{*}$
	(0.00262)	(0.00585)	(0.00293)
Offense Class	$-0.0677^{*}$	$-0.0768^{*}$	$-0.0700^{*}$
	(0.00242)	(0.0100)	(0.00277)
Year Trend	$-0.00239^{*}$	-0.00530	$-0.00237^+$
	(0.00102)	(0.00350)	(0.00131)
Constant	$0.840^{*}$	$0.911^{*}$	$0.855^{*}$
	(0.0164)	(0.0636)	(0.0186)
R-Squared	0.0376	0.0450	0.0394
Judge FE	Yes	Yes	Yes
Judge Race	All	Black	White
Observations	1201386	76538	811145

Table L.1: Racial Diversity and Sentencing in Harris County, TX

Judge-level clustered standard errors in parentheses.

Outcome is incarceration sentence (1,0).

 $^{+} p < .10, * p < 0.05$ 

## M Data Availability

Data and replication materials for this article are available in the APSR Dataverse. To protect individuals' privacy, those data do not include defendants' or judges names or defendants' dates of birth. However, the data do include author-generated unique identifiers for defendants and judges, as well as defendants' ages at the time of case disposition. To further protect judges' identities, the data do not include judges' courtroom numbers, but they do include the courthouse floor where each judge has their courtroom.

## 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.
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