

Black–White Sentencing Inequality

The Declining Significance of Race in Criminal Sentencing: Evidence from US Federal Courts

Michael T. Light, *University of Wisconsin-Madison, USA*

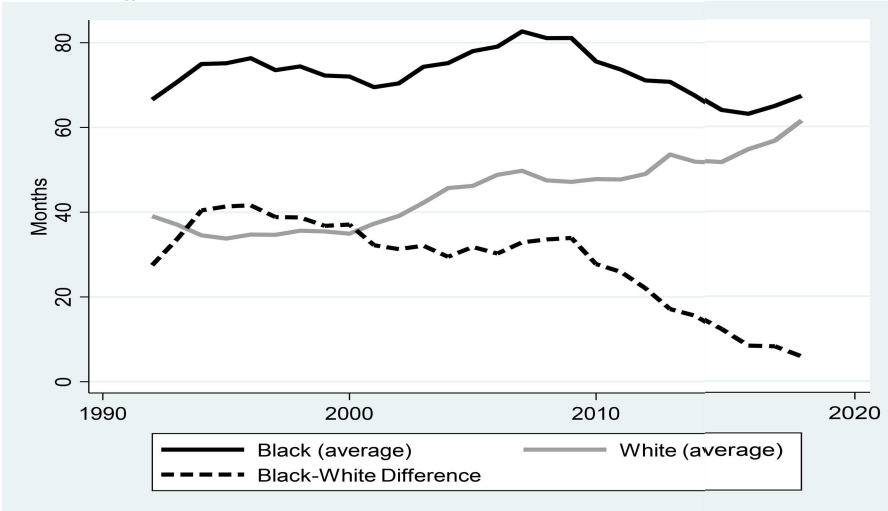
Racial inequality in sentencing has decreased substantially over the last decade. In 2009, the average sentencing difference between black and white defendants in federal court was nearly 3 yrs. By 2018, this difference was less than 6 mos. Among drug offenders over this same period, the black–white gap went from 47 mos. down to zero. Yet, despite the fact that racial inequality in the legal system remains at the fore of sociological discourse, these developments remain conspicuously under-evaluated and the underlying processes driving these changes remain unknown. This article fills this gap by applying longitudinal decomposition methods to US District Court data between 2009 and 2018. Three notable findings emerge. First, the declining racial gap was driven, in equal parts, by decreasing black sentences and increasing white sentences. Second, black and white sentences became more equal almost entirely due to changes in observable case characteristics and not due to changes in the treatment of offenders. Third, shifts in the prosecutorial use of mandatory minimums played a critical role in decreasing black–white sentencing inequality.

The dramatic expansion of the prison system in the United States since the late 1970s has had a markedly disparate impact on black Americans. The rate of incarceration for African Americans is nearly six times the white rate (Bronson and Carson 2019), and one-third of black men born at the turn of the century could expect to go to prison in their lifetimes, compared to just 6 percent of white men (Bonczar 2003). Research identifies differential sentencing as a major contributor to the black–white incarceration gap (Rehavi and Starr 2014). That is, the average black defendant receives a much longer sentence than a white defendant, particularly in federal court—the largest prison system in the United States. In 2009, for example, black defendants convicted in a federal court received sentences that were 34 mos. longer on average than white defendants (see figure 1).¹ Racial disparities for drug offenses, which comprise nearly half of the federal prison population, have been far greater. Between 1992 and 2009,

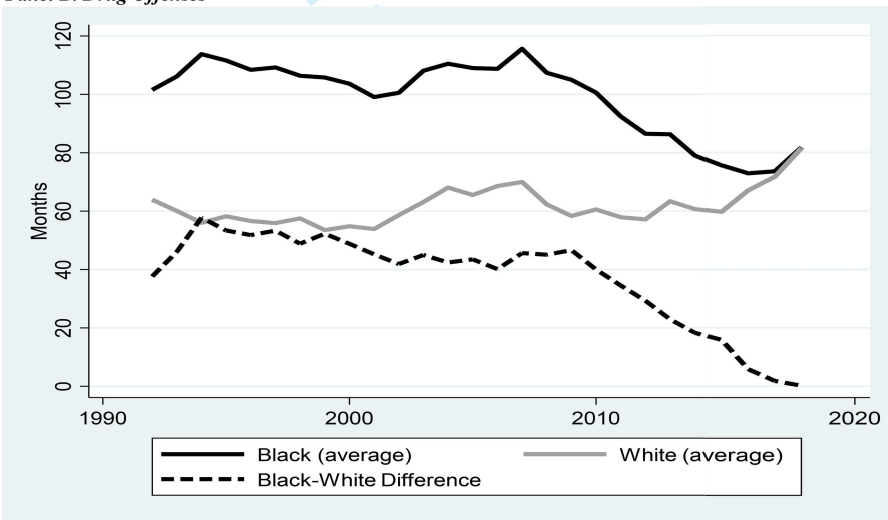
Direct correspondence to Michael T. Light, 8128 William H. Sewell Social Sciences Building, 1180 Observatory Drive, Madison, WI 53706 (milight@ssc.wisc.edu). I thank Grace Li, Makena Meyers, and Samantha Zeid for their assistance.

Figure 1. Average sentences for white and black offenders in US federal courts, 1992–2018

Panel A. All Offenses



Panel B. Drug Offenses



sentences among black drug offenders were nearly 4 yrs. longer on average than those for white drug offenders.

Activists, scholars, and policymakers have highlighted these stark inequalities in the federal War on Drugs as a “purveyor of mass injustice” (Johnson 2019, xi) and a form of “institutionalized racism” (Lynch 2016, 8) which has created “new racial caste system” akin to Jim Crow (Alexander 2010, 11). And although black–white inequality in incarceration rates have declined since 2000, substantial and pervasive racial imprisonment disparities endure (Sabol,

Johnson, and Caccavale 2019). As a result, racial inequity in punishment remains a cause for concern for many (Ingraham 2017; Johnson 2019).

Given the amount of public, political, and scholarly attention to the issue of racial inequality in the legal system generally, and to the topic of criminal punishment specifically, it is surprising that a significant development in federal courts has largely gone unnoticed: *over the past decade, the black-white sentencing gap nearly disappeared. For drug offenders, it has disappeared.* As demonstrated in figure 1, the overall black-white sentencing gap went from 34 mos. in 2009 to less than 6 mos. in 2018, a reduction of more than 80 percent. And it is important to note that these trends account for the differential likelihood of a prison sanction, as those who are not incarcerated are counted as 0 mos. of imprisonment (separate trends for incarceration and sentence length are shown in appendix figures 1 and 2 in the online appendix).

In both absolute and relative terms, the trends for drug offenses are even more noteworthy. Over this same period, there was a 100 percent reduction in the black-white sentencing gap in federal drug cases, from a mean difference of 47 mos. in 2009 to less than a quarter month in 2018. Yet, despite substantial research attention to whether minority defendants are treated more harshly than whites (King and Light 2019), no research to date has examined the underlying processes driving these changes. This is a significant gap for several reasons.

First, the elimination of racial disparities in punishment was a primary motivation for the sentencing reform movement of the 1970s and 1980s and a key goal of the guidelines that govern sentencing in US district courts. On this point, the federal system is uniquely instructive as it often sets the stage for state and local practices and can spur national changes to criminal justice policy (Tonry 2011; Raphael and Stoll 2013). Moreover, equality before the law is the bedrock of American jurisprudence. When race infects punishment decisions, the legitimacy of the criminal justice system is undermined. Therefore, understanding whether and how the legal system can better achieve equal justice informs foundational constitutional principles. Beyond the courtroom, increased fairness has broader societal and criminological implications. Given the sheer scale of the US carceral state combined with its disparate racial impact, a growing scholarly consensus highlights the criminal justice system as a salient driver of contemporary racial stratification (Western 2006). In addition, unequal legal treatment can fuel racial enmity and foment legal cynicism, which in turn encourages crime (Tyler 1990). It is thus critical to understand how race matters at sentencing and why it seems to matter less today than it did a decade ago.

This article seeks to fill this gap by applying longitudinal decomposition methods to the US federal court data between 2009 and 2018. This inquiry is primarily concerned with understanding the extent to which the declines in racial sentencing disparities reflect differences in case characteristics or differential treatment, a long-standing question in the sociology of punishment (Bushway and Forst 2013). Within this context, I begin by appraising several potential accounts for the declining significance of race in criminal sentencing, ranging from decreasing punitiveness, to reductions in racial bias, to the effects of legal and policy changes.

Potential Reasons for Change in Sentencing Disparities

Reduced Punitiveness

It is clear from [figure 1](#) that 2009 marks a significant shift in black–white sentencing inequality. Although the race gap had decreased slightly since the mid-1990s, there was little indication that black–white sentencing differences were about to descend toward zero over the next decade. Indeed, between 2000 and 2009, the average sentencing gap evidenced considerable stability, decreasing by only 3 mos. for all offenders and only 2 mos. for drug offenders. The timing of these changes may be informative. Following decades of ballooning prison populations, during which racial disparities in incarceration increased substantially ([National Research Council 2014](#)), mass incarceration reached its apex in 2009 at 1.6 million² ([Bronson and Carson 2019](#)). Since then, the prison population has decreased by roughly 9 percent, resulting in nearly 150,000 fewer people incarcerated ([Kang-Brown, Schattner-Elmaleh, and Hinds et al. 2019](#)). Notwithstanding a reputation for draconian sanctions, the federal system has played an outsized role in this trend, accounting for 20 percent of the decarceration over this period, while only holding 12 percent of all prisoners ([Bronson and Carson 2019](#)). When juxtaposed with the trends observed in [figure 1](#), this raises the possibility that the declines in the black–white sentencing gap are tracking reductions in overall punitiveness.

At least two trends in the data, however, do not align with this interpretation. First, there is little evidence that federal sanctioning actually became less harsh over this period ([Hofer 2019](#)). In 2009, the average sentence in US federal courts was 45 mos. Over the next decade, average sentences waxed and waned, from a low of 41 mos. in 2011 up to 43 mos. in 2018, yet black–white inequality continued to fall during this entire period. This relates to the second key trend: The closing of the sentencing gap was only partially driven by lighter sanctions for black defendants. Equally important was a significant increase in the average sentences for white offenders. Between 2009 and 2018, the average sentence for whites increased by 30 percent, from 47 mos. to 61 mos. Over this same period, the average sentence for blacks dropped from 81 down to 67 mos., a 17 percent reduction. An even more vivid story of parity unfolded for drug cases, where a 23-mo. decrease in the sentences for black drug offenders was matched by a 23-mo. increase for white drug offenders. Taken together, these figures highlight the importance of explaining the bifurcated trends in federal sentencing and suggest that factors beyond general reductions in punitiveness drove the closing of the racial sentencing gap.

Differential Treatment

A common theme within sentencing research is that punishment decisions are susceptible to influences beyond legally relevant case characteristics. For instance, multiple theoretical accounts suggest that negative racial stereotypes and attributions may act as cues to gauge the efficacy of deterrence, evaluate defendant blameworthiness, or assess future dangerousness ([Steffensmeier,](#)

Ulmer, and Kramer 1998). For this reason, concerns over biased decision-making have motivated multiple sentencing reforms aimed at limiting judicial discretion, including the federal sentencing guidelines (Hofer 2007). These concerns have taken on added salience in recent years in the wake of the 2005 Supreme Court decision in *U.S. v Booker*, which rendered the federal sentencing guidelines “effectively advisory” and substantially increased judicial discretion at sentencing (Yang 2015). In this vein, it is increasingly commonplace for criminal justice reformers to call for education and orientation programs to sensitize judges to the ubiquity and perniciousness of unconscious bias (Kang et al. 2012). This is because as long as racial bias exists within society generally, “criminal justice practitioners’ use of discretion [will be] – often unintentionally – influenced by racial bias” (The Sentencing Project 2015, 4).

If this is indeed the case, the scope of racial bias in the US—both overt and unconscious—is consequential for understanding racial disparities in sentencing. On this point, there have been promising trends over the past decade. A recent analysis of 4.4 million tests from Project Implicit found that implicit racial biases decreased by 17 percent between 2007 and 2016, while explicit biases decreased by 37 percent (Charlesworth and Banaji 2019). Anti-black hate crimes and Google searches for racist jokes also declined over this period (Pinker 2018).³ Thus, one might expect these general reductions in racial animus to permeate case decision-making in ways that translate to greater equity at sentencing. Such shifts would be further buttressed by heightened awareness around racial justice spurred by recent, widely read indictments of mass incarceration (Alexander 2010). Taken together, these trends suggest that the closing of the black–white sentencing gap may be driven by a reduction in the differential treatment between black and white defendants. In other words, even absent significant changes in case characteristics, it is possible over time that black defendants are simply being treated more like white offenders.

Legal Changes

Although changes in the treatment of black defendants may be partially responsible for the closing of the racial punishment gap, there are reasons to doubt that this would be the sole or even primary cause. There is increasing recognition among sentencing scholars that legally relevant factors that are ostensibly race-neutral but have disparate racial impacts play an outsized role in driving racial disparities in punishment (Baumer 2013; Frase 2009; Tonry 2011; Ulmer, Painter-Davis, and Tinik 2016). The infamous 100-1 crack versus powder distinction in federal law is the paradigmatic example. Created by Congress as part of the Anti-Drug Abuse Act of 1986, just 5 g of crack cocaine triggered the same 5-yr. mandatory minimum prison sentence as 500 g of powder cocaine. Though the law’s text was race-neutral, its impact was not. According to Mona Lynch (2016), “the fine-grained distinctions made between drug types in the new federal drug laws institutionalized racism in the system of punishment . . .” (8). Throughout the 1990s, for instance, over 85 percent of individuals convicted of federal crack charges were black. Given such disparities, the

crack-powder distinction has long been criticized for its racially discriminatory impact (Provine 2011), including by the US Sentencing Commission (USSC). The Commission reported in its 15-yr. assessment of the federal guidelines, “This one sentencing rule contributes more to differences in average sentences between African-American and White offenders than any possible effect of discrimination. Revising the crack cocaine thresholds would better reduce the gap than any other single policy change, and it would dramatically improve the fairness of the federal sentencing system” (USSC 2004, 132). This suggests that laws involving drug offenses, more so than the exercise of judicial discretion, are the key to understanding racial disparities in punishment. The past 10–15 yrs. provide ample opportunity to test this thesis.

Beginning in May 2007, the USSC voted to modestly reduce the penalties for crack cocaine in the federal guidelines. In December of that same year, the Supreme Court ruled in *Kimbrough v. United States*, 552 U.S. 85 (2007) that judges could sentence crack offenders more leniently based on disagreements with the crack-powder disparity in the federal sentencing guidelines. In 2009, the court held in *Spears v. United States*, 551 US 261 (2009) that federal judges had the discretion to substitute an alternative crack-powder ratio to avoid sentencing disparity under *Kimbrough*. The most significant changes, however, occurred in 2010 when Congress passed The Fair Sentencing Act, which increased the amount of crack needed to trigger 5- and 10-yr. mandatory minimum sentences, thus altering the crack-powder ratio from 100:1 to 18:1. The following year, the USSC permanently incorporated these changes into the federal sentencing guidelines and applied them retroactively.

Despite substantial scholarly attention to the crack-powder distinction, there is surprisingly little research examining the efficacy of the Fair Sentencing Act in reducing racial disparities at sentencing. To correct this oversight, I pay particular attention to drug offenses and the differential punishment of distinct drug types throughout the analysis.

Policy Changes

In addition to legal changes, there were also significant policy shifts at the Department of Justice (DOJ) that are likely germane to the black–white sentencing gap. Beginning in 2010, Attorney General Eric Holder issued a memorandum to all federal prosecutors providing an updated framework for charging, plea-bargaining, and sentencing. In it, the Attorney General reminded prosecutors that they must be mindful to ensure their decisions “are made without unwarranted consideration of such factors such as race . . .” and that while they “should ordinarily charge” the most serious offense, that decision “must always be in the context of an individualized assessment” (Holder 2010, 1–2). More significant policy changes came in August 2013 when the DOJ launched its “Smart on Crime” initiative, driven in large part by the emerging consensus that “too many Americans go to too many prisons for far too long, and for no truly good law enforcement reason” (Holder 2013a, 2).

One of the goals of the Smart on Crime initiative was to reduce the volume of federal cases by focusing on fewer but more serious offenses. To this end, the shift by the Attorney General—the chief law enforcement officer of the federal government—was accompanied by substantial reductions in both federal arrests and cases. Between 2012 and 2016, the number of federal arrests went from over 172,000 to roughly 151,000⁴ and the number of cases sentenced in federal courts fell from over 84,000 to less than 68,000. These declines do not track underlying crime trends over this period. Indeed, the national violent crime rate recorded by the Federal Bureau of Investigation (FBI) was nearly identical in 2012 (387.8 per 100,000) and 2016 (386.3 per 100,000) as was the drug crime rate (489 per 100,000 in 2012 compared to 486 per 100,000 in 2016).⁵

A second major aim was to lessen significant demographic disparities in the federal criminal justice system. Specifically, the DOJ called for a reduction in the imposition of harsh mandatory minimum sentences for low-level, non-violent drug offenders by stipulating conditions for when such charges should be rejected. Even in cases when a mandatory minimum could be sought based on the drug type and amount, prosecutors were informed to decline such charges if the case met four criteria: (1) the offense did not involve violence, weapons, or minors; (2) the defendant was neither a leader nor organizer in a criminal organization; (3) the defendant was not tied to gangs or cartels; and (4) the defendant lacked a significant criminal history (Holder 2013b). Under these conditions, prosecutors were also instructed against seeking recidivist enhancements under the guidelines. Lastly, federal prosecutors were advised to consider advocating for more lenient sentences in cases where the guideline range exceeded the statutory minimum.

Collectively, these changes at the DOJ appear to have altered the priorities among federal law enforcement. For example, the number of crack arrests reported by the Drug Enforcement Administration (DEA) dropped by nearly half between 2012 and 2016 despite the fact that crack use changed little over this period (Drug Enforcement Administration 2018) and the number of cocaine-related arrests nationally actually increased 17 percent.⁶

Each of these policy shifts is likely consequential for racial inequality. Given that black men are more likely to be subject to arrest and conviction, particularly for drug crimes, the substantial sentencing enhancement for criminal recidivism under the “career offender” guideline⁷ has received repeated criticism for contributing to racial disparity without furthering the goals of sentencing (Hofer 2019). In line with this view, 65 percent of those sentenced as “career offenders” in 2009 were black. Likely more significant than the recidivism provisions are the modifications to mandatory minimum charging. There is now a substantial body of evidence suggesting that the use of mandatory minimum statutes is a significant contributor to disparities in federal sentencing (Starr and Rehavi 2013). An analysis of federal data by Rehavi and Starr (2014), for instance, found that after accounting for pre-charge characteristics such as the arresting offense, the majority of the black–white sentencing gap was explained by the initial mandatory minimum charging decision. Analyses of federal court data by Fischman and Schanzenbach (2012) and Yang (2015) reached substantively

similar conclusions. Thus, to the extent that the DOJ guidelines under Eric Holder resulted in fewer drug cases, fewer recidivism enhancements, and the reduced application of federal drug mandatory minimum statutes, this would disproportionately benefit black defendants and lessen black–white sentencing inequality.

Current Study

Combined, the previous review identifies three potential, though not mutually exclusive, explanations for the declines in black–white sentencing inequality: *differential treatment*, *legal changes*, and *policy changes*. I draw from the USSC's Standardized Research Files to evaluate each of these accounts. The primary analysis compares cases for non-Hispanic black and non-Hispanic white defendants in 2009 (the year the drop in inequality began) and 2018. By law, the USSC collects information on all criminal defendants sentenced in US District Courts, thus capturing the entire universe of sentenced federal felony cases (as well as class A misdemeanors). The USSC files are remarkably rich, providing comprehensive measures of the legal characteristics associated with a case (e.g., the type of drugs involved, whether a case involved a mandatory minimum statute and mode of conviction) in addition to detailed measures of defendants (e.g., race, age and education) and their prior criminal justice involvement (e.g., previous convictions and recidivism history).

Dependent Variable

The dependent variable is the length of sentence, measured as the number of months of incarceration imposed. In line with previous research, sentence length is capped at 470 and logged to reduce positive skewness.⁸ When evaluating racial disparities, the population of interest consists of all convicted offenders, and thus a 1 was added prior to logging to include those who were not imprisoned. This approach to examining cumulative racial disparities aligns with other notable federal sentencing studies (Fischman and Schanzenbach 2012; Yang 2015; Rehavi and Starr 2014). The definitions and measurement properties for all variables used in the analysis are displayed in Appendix Table 1 in the online supplementary material.

Independent Measures

Research consistently demonstrates the two most salient determinants of sentencing are the severity of the offense and the defendant's criminal history. In line with recent research on racial disparities in federal courts, I capture these effects using the USSC measures for the base offense level—ranging in the sentencing grid from 1 (least severe) to 43 (most severe)—and the defendant's criminal history score—ranging from 1 (lowest criminal history) to 6 (highest criminal history) (Fischman and Schanzenbach 2012; Yang 2014).⁹ Though scholars often use the guideline presumptive sentence to measure these critical case

factors, there is increasing recognition that this approach may be problematic for two reasons. First, despite the fact that most federal cases are adjudicated by plea bargain, judges retain significant influence over the final sentence. Moreover, calculating the final offense level is often fact-intensive and subject to the discretion of both judges and prosecutors (Schanzenbach and Tiller 2007). As a result, multiple studies suggest that the presumptive punishment is endogenous to sentencing outcomes (Fischman and Schanzenbach 2011, 2012; Yang 2014, 2015). The base offense level, on the other hand, is determined by the crime(s) of conviction and is calculated initially by probation officers during a presentencing interview and is therefore reasonably exogenous to judicial discretion (Fischman and Schanzenbach 2012; Starr and Rehavi 2013). Second, the use of the presumptive sentence potentially obscures whose behavior is determining the sentence—the judge or the prosecutor—because it includes factors such as the prosecutors’ application of mandatory minimum penalties. Given the emphasis in prior work on the contribution of mandatory minimum statutes to racial sentencing disparities and the significant policy shifts regarding the application of these prosecutorial tools over the last decade, it is important to consider these factors separately. For this reason, I include a third crucial measure in the analysis, the total minimum prison term required by federal statute based on all counts of conviction (i.e., the statutory mandatory minimum; capped at 470 mos.) (c.f. Fischman and Schanzenbach 2012).

The offense category is another important determinant of the final sentence. Of particular concern are the detailed distinctions among drug types in federal law. For drug offenses, I differentiate between powder cocaine (reference), crack cocaine, heroin, marijuana, methamphetamine, and other drugs. The remaining offenses include immigration, violence, property/fraud, firearms, sex offenses, and miscellaneous other offenses. I also account for three additional case characteristics: whether the defendant was convicted by plea (1 = yes); whether they were detained pending sentencing (1 = yes); and whether they received a sentencing enhancement under the “career offender” guideline for criminal recidivism (1 = yes).

Lastly, I capture several key offender attributes, including their sex (male = 1), age, citizenship status (non-US citizen = 1), and educational attainment (high school graduates = 1, those with some college = 2, and college graduates = 3, with those without a high school degree serving as the reference category).

Methods and Logic of Analysis

The typical approach in sentencing disparity studies is to identify a gap in sentencing outcomes and then use regression methods to “filter out” legally relevant factors (e.g., criminal history) to see if the observed difference remains (Baumer 2013). This underscores the importance of examining the average racial gaps in sentencing but also highlights a key shortcoming of this approach—the inability to identify the measures driving these disparities. In other words, an examination of the residual race effect obfuscates our understanding of the sources of racial sentencing disparities. To correct for this, I use pooled Oaxaca

decomposition methods (Oaxaca 1973) to estimate the relative contribution of each control variable to the total black-white sentencing gap.

The basic setup of the Oaxaca decomposition is expressed as:

$$y^{\text{black}} - y^{\text{white}} = \Delta x \beta^{\text{white}} + \Delta \beta x^{\text{black}}, \quad (1)$$

where y represents the number logged months of incarceration, Δx is equal to $x^{\text{black}} - x^{\text{white}}$ and represents racial differences in average case and offender characteristics (often called the explained component), and $\Delta \beta$ equals $\beta^{\text{black}} - \beta^{\text{white}}$ and connotes racial differences in the effects of these characteristics (often called the unexplained component). Stated differently, decomposition analysis divides the gap into the components sentencing scholars are interested in explaining: Is the black-white gap driven by differences in case characteristics (e.g., an observed compositional effect)? or are black defendants treated differently than whites given the same relevant factors (e.g., an unobserved treatment effect)? Decomposition analysis addresses this exact counterfactual. The pooled decomposition used here only slightly modifies this basic equation:

$$y^{\text{black}} - y^{\text{white}} = \Delta x \beta^P + \left[x^{\text{black}} (\beta^{\text{black}} - \beta^P) + x^{\text{white}} (\beta^P - \beta^{\text{white}}) \right], \quad (2)$$

where β^P is the vector of coefficients from pooled regression models inclusive of both white and black defendants (Neumark 1988).¹⁰

One drawback of the standard decomposition approach is that it involves only two groups. Understanding why black-white inequality decreased over time, however, involves four groups: blacks and whites in two time periods. I thus employ the Smith-Welch extension of the Oaxaca decomposition (Smith and Welch 1989) to examine changes in the black-white gap between 2009 and 2018.¹¹ This double decomposition lends itself to the same counterfactual comparisons as those from standard decomposition methods. That is, did the gap shrink due to the convergence of average case characteristics over this period? If so, which factors were most responsible for this decline? Adding time to the notation used above, the main difference in endowments is expressed as

$$\left[(x_{t1}^{\text{black}} - x_{t1}^{\text{white}}) - (x_{t0}^{\text{black}} - x_{t0}^{\text{white}}) \right] \beta^{P \ t1,0}. \quad (3)$$

Or did the treatment of black and white defendants change markedly over this period even without significant variability in case-level features? This is captured by

$$x_{t1}^{\text{black}} \left[(\beta_{t1}^{\text{black}} - \beta_{t1}^{\text{white}}) - (\beta_{t0}^{\text{black}} - \beta_{t0}^{\text{white}}) \right]. \quad (4)$$

Of course, some combination of equations 3 and 4 may explain the reductions in black-white sentencing inequality. I thus turn to the results to test these possibilities.

Results

Descriptive Analysis

I begin by first examining the descriptive profiles of white and black offenders. For each variable in the analysis, [table 1](#) displays the number of cases, proportion, and *t*-tests for significant differences between time periods. Starting with white defendants, several notable patterns help explain the increase in sentences since 2009. Though there were substantially fewer white defendants in 2018 (13,732 compared to 19,754 in 2009), the base offense level for these offenders was slightly higher as was their criminal history score. In addition, the average mandatory minimum sentence increased by 6 mos. over this period, from approximately 28 to 34 mos.. This could reflect changes in the offense types. For instance, reductions in cocaine and marijuana cases were offset by modest increases in heroin cases and a substantial rise in methamphetamine cases. Indeed, the roughly 2,100 methamphetamine cases in 2009 made up only 11 percent of white offenders. By 2018, this rose to over 3,000 methamphetamine cases, comprising 26 percent of all white offenders. This shift is consequential as methamphetamine is one of the most severely punished drugs in the federal guidelines, where 1 g of methamphetamine is sentenced the same as 20,000 g of marijuana. By comparison, 1 g of cocaine is equivalent to only 200 g of marijuana (see [USSC 2018 §2D1.1 Drug Quantity Table](#)). Sex offenses, another crime category that carries severe mandatory minimums,¹² also became more prominent among white offenders, going from 10 to 15 percent of cases. Regarding plea rates, pre-sentencing detention, or designations as “career offenders,” there was limited change over this period.

The second set of results in [table 1](#) examines potential reasons for declining punishments for black offenders. Although there was no change in the average criminal history score, there was a slight decrease in the base offense level between 2009 and 2018. This decline, however, is dwarfed by the dramatic reduction in the statutory minimum penalty, which dropped by a full 2 yrs., from 56 mos. in 2009 to 32 in 2018. A major reason for this reduction was the declining use of any mandatory minimum penalties. In 2009, 46 percent of black offenders were sentenced under a mandatory minimum statute. By 2018, only 31 percent were, and this was actually an increase since 2017 when only 28 percent of black offenders received a mandatory penalty. By comparison, white offenders were subject to mandatory minimums in only 27 percent of cases in 2009, but 31 percent in 2018. Stated differently, disparities in the use of mandatory minimums over the last decade went from an 18-percentage point gap that disadvantaged black offenders to a 5 percentage point gap that disadvantaged whites.¹³

It is important to note that the application of federal mandatory minimum statutes is entirely the product of prosecutorial, not judicial, discretion. Thus, the descriptive results align with the aims of DOJ directives put forth under the Obama administration, calling for greater judiciousness in the use of mandatory minimums. In 2009, for instance, 29 percent of sentenced offenders were convicted under mandatory minimum statutes. By 2016, the last year of the

Table 1. Descriptive Differences Among White and Black Offenders Between 2009 and 2018

Measures	Whites					Blacks				
	2009		2018			2009		2018		
	Mean	SE	Mean	SE	Difference	Mean	SE	Mean	SE	Difference
<i>Key case characteristics</i>										
Base offense level	17.5	(0.1)	19.3	(0.1)	1.8	20.9	(0.1)	19.2	(0.1)	−1.7
Criminal history	2.2	(0.0)	2.5	(0.0)	0.3	3.2	(0.0)	3.3	(0.0)	0.0
Statutory minimum	27.7	(0.4)	33.9	(0.5)	6.2	55.7	(0.7)	31.8	(0.6)	−24.0
<i>Offense types</i>										
Cocaine (reference)	5%	(0.002)	2%	(0.001)	−0.04	10%	(0.002)	7%	(0.002)	−0.03
Crack	3%	(0.001)	1%	(0.001)	−0.02	27%	(0.004)	8%	(0.002)	−0.18
Heroin	1%	(0.001)	3%	(0.001)	0.02	3%	(0.001)	8%	(0.002)	0.05
Marijuana	9%	(0.002)	2%	(0.001)	−0.07	3%	(0.001)	2%	(0.001)	−0.01
Methamphetamine	11%	(0.002)	22%	(0.004)	0.11	1%	(0.001)	6%	(0.002)	0.05
Other drugs	4%	(0.001)	4%	(0.002)	0.00	2%	(0.001)	4%	(0.002)	0.02
Immigration	8%	(0.002)	3%	(0.001)	−0.06	2%	(0.001)	2%	(0.001)	0.00
Violent	3%	(0.001)	4%	(0.002)	0.00	3%	(0.001)	9%	(0.003)	0.07
Property/fraud	27%	(0.003)	27%	(0.004)	0.00	19%	(0.003)	19%	(0.003)	0.00
Firearms	12%	(0.002)	13%	(0.003)	0.02	25%	(0.003)	28%	(0.004)	0.03
Sex offense	10%	(0.002)	15%	(0.003)	0.06	1%	(0.001)	3%	(0.002)	0.03
Other offense	7%	(0.002)	5%	(0.002)	−0.02	4%	(0.002)	4%	(0.002)	0.00

(Continued)

Table 1. Continued

Measures	Whites					Blacks				
	2009		2018			2009		2018		
	Mean	SE	Mean	SE	Difference	Mean	SE	Mean	SE	Difference
<i>Other case/offender characteristics</i>										
Guilty plea	95%	(0.001)	96%	(0.002)	0.01	93%	(0.002)	95%	(0.002)	0.02
Pre-sentencing detention	59%	(0.004)	60%	(0.004)	0.02	73%	(0.004)	72%	(0.004)	−0.01
“Career offender”	2%	(0.001)	2%	(0.001)	0.00	10%	(0.002)	7%	(0.002)	−0.03
Male	83%	(0.003)	81%	(0.003)	−0.02	87%	(0.003)	89%	(0.003)	0.01
Age	39.3	(0.1)	41.4	(0.1)	2.1	33.9	(0.1)	35.4	(0.1)	1.4
Non-US citizen	12%	(0.002)	5%	(0.002)	−0.07	5%	(0.002)	4%	(0.002)	−0.01
Less than high school	27%	(0.003)	16%	(0.003)	−0.11	39%	(0.004)	32%	(0.004)	−0.07
High school graduate	38%	(0.003)	42%	(0.004)	0.04	38%	(0.004)	41%	(0.004)	0.03
Some college	24%	(0.003)	29%	(0.004)	0.05	19%	(0.003)	22%	(0.004)	0.03
College graduate	11%	(0.002)	13%	(0.003)	0.02	4%	(0.002)	5%	(0.002)	0.01
N	19,754		13,732		−6,022	15,809		13,383		−2,426

Note: **BOLD** denotes significant difference at the $p < .05$ level based on t -test.

Obama administration, only 20 percent were. This trend reversed during the Trump administration, where 25 percent of offenders received a mandatory minimum penalty in 2018. I return to the issue of administration changes in the Discussion section.

As with whites, there were marked shifts in the types of offenses among black defendants. Most notably, the massive decrease in crack cocaine cases. In 2009, there were 4,216 crack cases, representing 27 percent of black offenders. By 2018, there were only 1,137 crack cases—a nearly 75 percent reduction—comprising only 8 percent of black offenders. Here again, this decline is likely due more to shifting enforcement emphases than to changes in underlying criminal behavior. According to the National Drug Threat Assessment ([Drug Enforcement Administration 2018](#)), there was little overall change in crack cocaine use between 2009 and 2016. These results raise the interesting possibility that the most significant policy changes toward crack over the past decade were not the sentencing reductions under The Fair Sentencing Act, but the scaling back of crack arrests and prosecutions at the DOJ. Regarding other offenses, I observe fairly significant increases in violent offenses and modest increases in heroin, methamphetamine, firearms, and sex offenses. In addition, slightly fewer black offenders received the “career offender” enhancement in 2018.

Combined, the results in [table 1](#) suggest that the sentencing profiles of both white and black offenders changed considerably between 2009 and 2018. The following sections evaluate which particular constellation of factors, both legal and unwarranted,¹⁴ explain the declining black–white punishment gap using decomposition analysis.

Decomposition Analysis

The first column in [table 2](#) reports the decomposition results for white offenders between 2009 and 2018. As seen in the descriptive figures, the predicted sentence for whites increased over this period, from 2.79 to 3.16 log mos., a difference of .36. An examination of the contributions of the explained and unexplained components of this change suggests that differential treatment played no role, as evidenced by the substantively small and statistically insignificant effect for the unexplained portion of the model (all statistical tests are based on heteroscedasticity robust standard errors clustered by district). In other words, the increase in white sentences is entirely attributable to the changes in the measured covariates, not to unobserved changes in the effects of these covariates. Looking at the individual measures, it is clear that several variables played an outsized role. The factors contributing most to the increase in white punishments are the base offense level (39%), sex offenses (21%), criminal history (20%), methamphetamine (7%), and mandatory minimums (6%).

The second model reports the same decomposition for the decrease in black sentences. Like the findings for whites, the unexplained component is unimportant, suggesting the decline is fully explained by changes in the average case composition. Two sentencing elements are most salient—the base offense level and the statutory minimum. In fact, these measures together account for more

Table 2. Decomposition Analysis of White and Black Sentences b/w 2009 and 2018 (Dep. Variable = logged months)

	White		Black	
2009	2.79***		3.58***	
	(0.05)		(0.05)	
2018	3.16***		3.45***	
	(0.06)		(0.05)	
Raw gap	0.36***		−0.14**	
	(0.05)		(0.04)	
Unexplained	−0.01		0.01	
	(0.03)		(0.02)	
Explained	0.37***		−0.15***	
	(0.05)		(0.04)	
<i>Measures</i>	<i>b</i>	% ^a	<i>b</i>	% ^a
Base offense level	0.15***	39%	−0.13***	87%
	(0.03)		(0.03)	
Criminal history	0.08***	20%	0.01	−4%
	(0.01)		(0.01)	
Statutory minimum	0.02***	6%	−0.07***	45%
	(0.01)		(0.01)	
Crack	0.00	0%	−0.00	3%
	(0.00)		(0.01)	
Heroin	0.00	0%	0.00	−1%
	(0.00)		(0.00)	
Marijuana	0.01	4%	0.00	−1%
	(0.01)		(0.00)	
Methamphetamine	0.03**	7%	0.00	−3%
	(0.01)		(0.00)	
Other drug	0.00	0%	0.00	0%
	(0.00)		(0.00)	
Immigration	−0.02	−6%	0.00	0%
	(0.02)		(0.00)	
Violent	0.00	1%	0.04***	−27%
	(0.00)		(0.01)	
Property/fraud	−0.00	−1%	−0.00	0%
	(0.02)		(0.01)	
Firearms	0.01	2%	0.01	−5%
	(0.01)		(0.00)	

(Continued)

Table 2. Continued

	White		Black	
Sex offenses	0.08***	21%	0.01***	−7%
	(0.02)		(0.00)	
Other offenses	0.00	1%	0.00	−1%
	(0.00)		(0.00)	
Guilty plea	−0.01	−2%	−0.01***	8%
	(0.00)		(0.00)	
Pre-sentencing detention	0.01	4%	−0.01	6%
	(0.03)		(0.01)	
“Career offender”	0.00	0%	−0.01***	3%
	(0.00)		(0.00)	
Male	−0.01*	−2%	0.01	−5%
	(0.00)		(0.00)	
Age	0.00	1%	−0.00**	3%
	(0.00)		(0.00)	
Non-US citizen	0.01	2%	0.00	0%
	(0.01)		(0.00)	
High school graduate	0.00	0%	−0.00	0%
	(0.00)		(0.00)	
Some college	0.00	0%	0.00	0%
	(0.00)		(0.00)	
College graduate	0.00	1%	0.00*	−1%
	(0.00)		(0.00)	
N	33,486		29,192	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standard errors are clustered by district and reported in parentheses. Dependent variable is the length of incarceration in months (logged).
^aProportional contribution to explained component.

than the overall reduction, meaning that black sentences should have declined further based on these two variables. The reduction was only .14 log mos. because these factors were partially offset by the increased relevance of violent crimes, and to a lesser extent, sex offenses.

Moving beyond within-race analysis, [table 3](#) examines black–white sentencing inequality in each period. Starting in 2009, the raw gap is .79 log mos. The results align with much of the previous literature in that the punishment gap between white and black offenders is largely driven by the differences in case-related factors. Focusing on the explained component, the results suggest that the racial sentencing gap would have been reduced by 80 percent if white and black defendants had the same observed characteristics. Among these characteristics, the most consequential by far were the differences in the base offense level and

criminal history, followed by differences in presentencing detention, mandatory minimums, and firearms offenses. In regard to the unexplained component, this means that 20 percent of the sentencing gap would remain even with equivalent case compositions. This corresponds to a sentencing penalty of approximately 4 additional mos. for black defendants, net of other offender attributes and legally relevant measures.¹⁵

By 2018, both the scope and causes of the black–white sentencing gap looked quite different. The raw gap is only .29 log mos. and the relative contribution of the explained portion of the model is comparably less. The observed characteristics account for just two-thirds of the gap and interestingly, both the base offense level and the statutory minimum played no role in the black–white sentencing gap. The largest contributing factors were differences in criminal history and pre-sentencing detention, followed by the greater prevalence of male, violent, and firearms offenders among black defendants. Here again, though, there is a much higher proportion of sex offenders among whites, which significantly counterbalanced some of these effects.

Turning to the unexplained component, although the relative contribution is 33 percent, two additional points merit attention. First, the actual effect size of the unexplained component is considerably less in 2018 (compare .10 to .16 in 2009). Second, the raw gap conditions the amount of racial disparity ascribable to either observed or unobserved characteristics. To illustrate, when I rerun the decomposition without logging sentence length, the raw gap is only 4.6 mos¹⁶ and the unexplained contribution to this disparity is just 1.3 mos. This means that the unexplained component would have to account for 100 percent of the black–white sentencing gap in 2018 in order to match the 4-mo. sentencing difference attributable to differential treatment of black defendants in 2009. Therefore, even if the unexplained effect was identical in both periods, there would still be substantially less unwarranted racial disparity in federal sentencing in 2018.

The decomposition results in table 4 address the primary question guiding this inquiry: What accounts for the *decline* of the black–white sentencing gap over time? There is little evidence to suggest that changes in treatment played a significant role. An examination of the explained and unexplained component reveals that only 8 percent of the decline can be credited to changes in the treatment of defendants upon conviction, which corresponds to less than 2 mos. of imprisonment. Recall that the overall decline was more than 28 mos. This means that changes in observable case characteristics account for a full 92 percent of the decline in the black–white sentencing gap over the last decade. Unsurprisingly, the factors accounting for the largest proportion of this decline are three of the most salient determinants of federal criminal sanctioning: the offense severity (i.e., base offense level), criminal history, and the statutory mandatory minimum. Smaller contributing factors include firearms offenses, marijuana offenses, and crack offenses. Case measures that widened the gap include immigration, violent, and sex offenses, in addition to pre-sentencing detention.

Table 3. Decomposition Analysis of Black–White Sentencing Inequality in 2009 and 2018 (Dep. Variable = Logged Months)

	2009		2018	
Black	3.58***		3.45***	
	(0.05)		(0.05)	
White	2.79***		3.16***	
	(0.05)		(0.06)	
Raw gap	0.79***		0.29***	
	(0.05)		(0.06)	
Unexplained	0.16***		0.10**	
	(0.03)		(0.03)	
Explained	0.63***		0.19***	
	(0.04)		(0.05)	
<i>Measures</i>	<i>b</i>	% ^a	<i>b</i>	% ^a
Base offense level	0.29***	47%	−0.00	−3%
	(0.03)		(0.03)	
Criminal history	0.25***	41%	0.12***	64%
	(0.02)		(0.01)	
Statutory minimum	0.08***	12%	−0.01	−4%
	(0.01)		(0.01)	
Crack	0.01	1%	0.00	2%
	(0.01)		(0.01)	
Heroin	−0.00	0%	0.00	0%
	(0.00)		(0.00)	
Marijuana	0.01	2%	−0.00	0%
	(0.01)		(0.00)	
Methamphetamine	−0.02*	−3%	−0.02	−9%
	(0.01)		(0.01)	
Other drug	−0.00	0%	0.00	0%
	(0.00)		(0.00)	
Immigration	−0.03	−4%	0.00	2%
	(0.02)		(0.00)	
Violent	−0.00	−1%	0.03***	17%
	(0.00)		(0.01)	
Property/fraud	−0.05*	−7%	−0.04***	−20%
	(0.02)		(0.01)	
Firearms	0.06***	10%	0.03***	16%
	(0.01)		(0.01)	

(Continued)

Table 3. Continued

	2009		2018	
Sex offenses	−0.13***	−21%	−0.10***	−51%
	(0.02)		(0.01)	
Other offenses	0.01*	1%	0.01***	4%
	(0.00)		(0.00)	
Guilty plea	0.02***	3%	0.01***	6%
	(0.00)		(0.00)	
Pre-sentencing detention	0.10***	15%	0.12***	64%
	(0.03)		(0.02)	
“Career offender”	0.01**	1%	0.01***	5%
	(0.00)		(0.00)	
Male	0.02***	3%	0.03***	18%
	(0.00)		(0.00)	
Age	0.00	0%	0.00	1%
	(0.01)		(0.01)	
Non-US citizen	0.00	1%	0.00	1%
	(0.00)		(0.00)	
High school graduate	0.00	0%	−0.00	0%
	(0.00)		(0.00)	
Some college	−0.00	0%	−0.00	−1%
	(0.00)		(0.00)	
College graduate	−0.01**	−1%	−0.02***	−11%
	(0.00)		(0.00)	
N	35,563		27,115	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standard errors are clustered by district and reported in parentheses. Dependent variable is the length of incarceration in months (logged).
^aProportional contribution to explained component.

Drug Offenses

Federal drug laws are notorious for their harsh punishments and disparate racial impact (Tonry 1995). For this reason, the dramatic decrease in racial disparity in drug sanctions warrants special attention. Thus, tables 5 and 6 decompose black–white sentencing inequality for drug offenses only. Starting in 2009 (column 1, table 5), the results largely align with previous research along three key dimensions. First, the racial sentencing gap is larger in drug cases relative to non-drug cases (compare .92 for drugs to .52 for non-drug cases). Second, a substantial portion of this black–white inequality is unexplained. Consistent with a considerable body of research documenting greater racial disparities for drug offenses (see Mitchell 2005 for a meta-analysis), the unexplained effect

Table 4. Decomposition Analysis of *Changes* in Black–White Sentencing Inequality b/w 2009 and 2018 (Dep. Variable = Logged Months)

Black–white gap (2009)	0.79	
Black–white gap (2018)	0.29	
Overall change	–0.50	
Unexplained	–0.04	
Explained	–0.46	
<i>Measures</i>	<i>b</i>	% ^a
Base offense level	–0.30	66%
Criminal history	–0.13	29%
Statutory minimum	–0.09	19%
Crack	–0.01	3%
Heroin	0.00	0%
Marijuana	–0.02	4%
Methamphetamine	0.00	0%
Other drug	0.00	0%
Immigration	0.03	–6%
Violent	0.04	–8%
Property/fraud	0.01	–2%
Firearms	–0.03	7%
Sex offenses	0.03	–7%
Other offenses	0.00	0%
Guilty plea	–0.01	2%
Pre-sentencing detention	0.03	–6%
“Career offender”	0.00	0%
Male	0.01	–3%
Age	0.00	0%
Non-US citizen	0.00	1%
High school graduate	0.00	0%
Some college	0.00	0%
College graduate	–0.01	3%
N	62,678	

Note: Dependent variable is the length of incarceration in months (logged).
^aProportional contribution to explained component.

is .27 (the unexplained effect for all offenses was only .16). Thus, the relative contribution of the unexplained component is 29 percent, culminating in an additional 7.5 mos. of incarceration for black drug offenders relative to their similarly situated white counterparts. Third, the majority of the black–white gap is due to differences in case characteristics; most notably, differences in base

offense levels and criminal history. Among the observables, the only measure working to the detriment of white drug offenders is the higher proportion of methamphetamine cases.

Less than 10 yrs. later, the picture of black–white inequality looks fundamentally different. By 2018, there was no discernible sentencing gap between black and white drug offenders. This null difference is driven by countervailing effects. Based on the composition of case and offender characteristics, whites should have received harsher penalties than black drug offenders. However, a significant unexplained component remains, counteracting these observable differences. In an unlogged model, these divergent effects are identical: the explained component producing 5 fewer mos. for blacks ($p > .10$), while the unexplained component increased black sentences by 5 mos. ($p < .05$), resulting in a null overall difference.

Looking at the differences between 2009 and 2018, it bears repeating that the average black–white sentencing gap went from nearly 4 yrs. down to 0 during this time. What accounts for this notable development? The results in [table 6](#) answer this question, and the findings are unequivocal—compositional differences. Over 99 percent of the reduction in black–white sentencing inequality is due almost entirely to just five case-level factors: the base offense level, criminal history, statutory minimums, crack offenses, and marijuana offenses. Stated differently, black and white drug sentences became more equal over the last decade because their observable case profiles became more comparable.

Discussion

Over the last decade, black–white inequality in federal sentencing has plummeted. Yet, despite the fact that racial inequality has been a key focus among civil rights groups, community activists, legal scholars, and social scientists, this trend remains conspicuously overlooked and under-evaluated. Applying longitudinal decomposition methods to US District Court data, this study sought to fill this gap. In doing so, it generated several notable findings, the implications of which bring both good news and bad.

The first bit of good news is obvious. Throughout nearly the entirety of the 1990s and 2000s, the average black defendant received a sentence that was nearly 3 yrs. longer than the average white defendant. These differences translated into stark racial inequalities in the federal prison system. By 2018, this gap was down to less than 6 mos. The decline among federal drug offenses—arguably the most nefarious form of legal inequality—was even more pronounced, going from roughly 4 yrs. down to zero in less than a decade. These developments should be welcomed news for anyone concerned with racial disparities in punishment and their collateral consequences for racial stratification more generally.

However, the divergent sentencing processes that drove racial parity gives pause for celebration. The reduction in black sentences is only half the story. The substantial increase in white sentences, especially in drug cases, played an

Table 5. Decomposition Analysis of Black–White Sentencing Inequality in Drug Cases in 2009 and 2018 (Dep. Variable = Logged Months)

	2009		2018	
Black	4.14***		3.84***	
	(0.06)		(0.05)	
White	3.22***		3.74***	
	(0.11)		(0.08)	
Raw gap	0.92***		0.11	
	(0.11)		(0.08)	
Unexplained	0.27***		0.23***	
	(0.04)		(0.05)	
Explained	0.65***		−0.13	
	(0.10)		(0.07)	
<i>Measures</i>	<i>b</i>	% ^a	<i>b</i>	% ^a
Base offense level	0.19***	30%	−0.23***	186%
	(0.05)		(0.03)	
Criminal history	0.24***	36%	0.06***	−51%
	(0.03)		(0.01)	
Statutory minimum	0.04***	6%	−0.03**	24%
	(0.01)		(0.01)	
Crack	0.01	1%	−0.00	4%
	(0.02)		(0.02)	
Heroin	−0.00	0%	−0.00	2%
	(0.00)		(0.01)	
Marijuana	0.03	5%	−0.00	0%
	(0.03)		(0.00)	
Methamphetamine	−0.06**	−10%	−0.07*	59%
	(0.02)		(0.04)	
Other drug	0.00	0%	0.00	−1%
	(0.00)		(0.00)	
Guilty plea	0.02***	4%	0.01***	−10%
	(0.00)		(0.00)	
Pre-sentencing detention	0.07**	11%	0.04	−30%
	(0.02)		(0.02)	
“Career offender”	0.02***	3%	0.02***	−16%
	(0.01)		(0.01)	
Male	0.05***	8%	0.08***	−61%
	(0.01)		(0.01)	

(Continued)

Table 5. Continued

	2009		2018	
Age	0.00	0%	0.01	−4%
	(0.01)		(0.00)	
Non-US citizen	0.03	4%	−0.00	2%
	(0.02)		(0.00)	
High school graduate	−0.00	0%	−0.00	1%
	(0.00)		(0.00)	
Some college	0.01**	1%	0.00	−1%
	(0.00)		(0.00)	
College graduate	0.00	0%	0.00	−1%
	(0.00)		(0.00)	
N	13,670		9,218	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standard errors are clustered by district and reported in parentheses. Dependent variable is the length of incarceration in months (logged).

^aProportional contribution to explained component.

equal role. Criminal justice reformers concerned with the racial ramifications of mass incarceration unanimously called for policies and practices to accomplish the former, but not the latter (Tonry 2011; Alexander 2010). Consequently, it is not obvious that the increase in white sentences is furthering the goals of racial equity.

The equality of punishment also appears considerably less sanguine when considered from a historical perspective. In the mid-1980s, prior to the implementation of the US Sentencing Guidelines (1987)¹⁷ and the passage of the 1986 and 1988 Anti-Drug Abuse Acts, there was already racial parity in sentences imposed and time served. Indeed, Hofer (2019) reports that black and white offenders in the mid-1980s could both expect to serve approximately 26 mos. in federal prison upon conviction. It was not until the “switch to the guidelines and the mandatory minimums and the policies they represent” did the chasm between white and black sentences open up (Hofer 2019, 173; see McDonald and Carlson 1993 for similar results). We are closer today than at any point to *re-achieving* equity, a laudable goal. But the intervening decades of extraordinary racial sentencing disparities have done irreparable harm while achieving no obvious policy end. Moreover, the sentences black and white defendants face today, while more equitable, are still substantially more severe than during the 1980s.¹⁸ Given the mounting evidence suggesting that the benefit–cost ratio of mass incarceration is likely well below zero (Johnson and Raphael 2012), the push for racial sentencing equity should be matched by an equally concerted emphasis on reduced sentencing severity.

On a more positive note, the detailed decompositions presented in this article help pinpoint the sources of racial disparity in sentencing. In doing so, they provide a useful roadmap for ameliorating racial punishment inequality.

Table 6. Decomposition Analysis of *Changes* in Black–White Sentencing Inequality in Drug Cases Between 2009 and 2018 (Dep. Variable = Logged Months)

Black–white gap (2009)	−0.92	
Black–white gap (2018)	−0.11	
Overall change	−0.81	
Unexplained	−0.01	
Explained	−0.81	
<i>Measures</i>	<i>b</i>	% ^a
Base offense level	−0.43	53%
Criminal history	−0.18	22%
Statutory minimum	−0.07	9%
Crack	−0.04	5%
Heroin	−0.01	1%
Marijuana	−0.05	6%
Methamphetamine	0.01	−1%
Other drug	0.00	0%
Guilty plea	−0.01	1%
Pre-sentencing detention	−0.03	4%
“Career offender”	0.00	0%
Male	0.03	−3%
Age	0.00	0%
Non-US citizen	−0.03	4%
High school graduate	0.00	0%
Some college	0.00	0%
College graduate	0.00	0%
N	22,888	

Note: Dependent variable is the length of incarceration in months (logged).

^aProportional contribution to explained component.

Although this analysis focused on the federal judiciary, many of the lessons are applicable to state court systems. The results align with the view that the major source of racial disparities in imprisonment is the disparate impact of seemingly neutral laws, not racially biased sentencing decisions (Tonry 2011; Ulmer, Painter-Davis, and Tinik 2016). Indeed, less than 10 percent of the overall reduction in the black–white sentencing gap was attributable to changes in the treatment of offenders between 2009 and 2018. Among drug offenders, changes in treatment played no role whatsoever. In other words, the move toward equity would have taken place even in the absence of any changes to judicial decision-making. For this reason, while educational programs aimed at counteracting unconscious bias and stereotyping among judges may send important normative

messages by reaffirming the goal of equality, they are likely to make only modest contributions toward achieving racial equity in US courts.

This is not to claim that unwarranted disparities were not present in this analysis. They were. In 2018, black offenders received an additional 1.3 mos. of incarceration relative to their white peers. In drug cases, they received an additional 5 mos. These results are not explained by measures of offense severity, criminal history, or key characteristics of the crime and trial. It is worth noting, however, that despite the richness of the USSC data, it is difficult to attribute these unexplained gaps solely to discrimination as they could reflect relevant unmeasured factors. Still, because any amount of racial discrimination is anathema to the rule of law, identifying the sources and remedies for these unwarranted differences is important for future research.

However, this analysis provides a cautionary tale regarding the analytical focus of the bulk of sentencing research. Because most regression-based analyses control for factors such as the presumptive sentence and mandatory minimums, they neglect the role of the laws and policies that disproportionately drive racial disparities in imprisonment (Hofer 2019). For example, had I focused solely on unexplained racial inequality in drug cases, I would have reported only modest change over the last decade, from 7.5 to 5 extra mos. for black defendants. However, I would have entirely missed the fact that relative to 2009, there were over 2,500 fewer black drug offenders sentenced in federal court, on average, receiving sentences that were close to 2 yrs. shorter. I also would have missed the nearly 2-yr. increase in the average sentences of white drug offenders over this period. In short, a narrow focus on unwarranted disparities may lose the forest for the trees. I speculate that the emphasis on unexplained disparity is partially responsible for why the declines in black–white punishment inequality documented here have received little analytical or public attention.

While this analysis highlights the disparate impact of race-neutral laws, it is important to note that it did not take major legislative overhauls to reduce the black–white sentencing gap. In fact, legal fixes appear to have played a relatively minor role. The changes to crack offenses offer an illustrative case study. One of the only major federal criminal justice laws passed between 2009 and 2018 was the 2010 Fair Sentencing Act, which reduced the 100-1 crack/powder distinction down to 18-1.¹⁹ This was an important step toward reducing the impact of what has been widely seen as an unfair and draconian law. However, the changes in crack sentencing over the last decade have been far less consequential in reducing black–white sentencing inequality than simply the reduction in crack cases. I demonstrate this empirically in table 7. Here, I replicate the decomposition analysis for drug cases but replace the race-specific sentences for crack offenders in 2018 with the average sentences for crack offenders in 2009. In other words, how much of the black–white sentencing gap in drug cases would have been eliminated even absent changes to crack sentencing? The answer: nearly all of it. The results in table 7 show that 89 percent of decline would have occurred without any changes to the punishments for crack offenders.²⁰ And it is important to reiterate that the decline in crack cases in no way tracks the underlying trends in crack use over this period.

Table 7. Examining the Impact of Crack Sentencing Reductions (Dep. Variable = Logged Months)

	2009	2018 (Observed) ^a	2018 (No change in crack sentences) ^b
Black	4.14*** (0.06)	3.84*** (0.05)	3.96*** (0.04)
White	3.22*** (0.11)	3.74*** (0.08)	3.76*** (0.08)
Raw gap	0.92*** (0.11)	0.11 (0.08)	0.20** (0.07)
Unexplained	0.27*** (0.04)	0.23*** (0.05)	0.25*** (0.05)
Explained	0.65*** (0.10)	−0.13 (0.07)	−0.04 (0.06)

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standard errors are clustered by district and reported in parentheses. Dependent variable is the length of incarceration in months (logged).

^aDecomposition results based on observed sentences in 2018.

^bDecomposition results assuming no change in crack sentences since 2009.

For state and local jurisdictions, this means de-prioritizing the prosecution of offenses that have disproportionate racial impacts can significantly move the needle toward racial sentencing equity even without changes to the laws governing sentencing. Identifying which rules and offenses produce racial disparities is thus paramount. For this reason, the recently revised *Model Penal Code: Sentencing* (MPCS) developed by the American Law Institute encourages lawmakers to prepare racial impact statements for proposed correctional policies (Reitz and Klingele 2019). The overarching goal is to identify any racially disparate impacts of initiatives prior to their adoption and examine whether the stated objectives can be achieved in a way that minimizes disparity. Taking this logic one step further, policymakers could request racial impact statements on various aspects of contemporary penal practices to identify the most effective strategies for ameliorating current racial disparities.

The fact that the sentencing changes observed in this study appear to be driven by policy emphases at the DOJ, however, is a double-edged sword. This means changes to law enforcement priorities, the use of mandatory minimums, and prosecutorial recommendations are easily reversible. There is evidence that this trend is already underway. In May 2017, Attorney General Jeff Sessions rescinded the Holder prosecutorial guidelines and ordered federal prosecutors to pursue the toughest possible charges and sentences against defendants, meaning “those that carry the most substantial guidelines sentence, including mandatory-minimum sentences” (Sessions 2017, 1). Unsurprisingly, this has resulted in significant changes in both sentencing and mandatory minimum penalties in recent years. Among white and black offenders, the average sentence in US

federal courts increased by nearly 6 mos. (from 58.6 to 64.3) between 2016 and 2018, statutory minimums increased by 5 mos. (from 28.4 to 33.1), and the percent of cases sentenced under a mandatory minimum increased by over 3 percentage points (from 28.2 to 31.5). Interestingly, these developments have disproportionately affected white defendants. The number of whites sentenced under a statutory minimum increased by over 5 percentage points between 2016 and 2018. The comparable increase for blacks was less than 1 percentage point. This helps explain the particularly sharp increase in white sentences in recent years shown in [figure 1](#), especially in drug cases.

Taken together, the evidence suggests that policy shifts at the DOJ drove much of the reduction in the black–white sentencing gap over the last decade. For this reason, it is difficult to predict the trajectory of racial sentencing inequality into the future as different administrations emphasize different criminal justice initiatives, thus underscoring the importance for researchers to continue tracking racial disparities in US courts. This analysis points to other fruitful avenues for further research as well. The importance of the DOJ necessarily draws analytical attention to the role of police and prosecutorial discretion, yet, the USSC data are relegated to post-conviction information. Thus, the extent to which black–white inequality changed in recent years in the highly discretionary pre-sentencing decisions such as arrest, charging, and conviction stages is a critical area for further inquiry.

The dramatic reduction of black–white inequality was the focus of this analysis for obvious reasons. Blacks have long been the racial minority most oppressed by the legal system ([Kennedy 1997](#)), and for decades, the sentencing gaps between black and white offenders have far outpaced the punishment differences between whites and other groups. Still, with the growing diversity of US society generally, and the federal docket specifically, future research would do well to systematically examine the punishment trends between other racial/ethnic groups as well.²¹ Given the perceived links between Latino immigration and crime in public, political, and media discourse ([Chavez 2008](#)), a focus on Hispanic ethnicity is particularly acute.

Conclusion

Equal justice is the foundation of the US legal system. For this reason, the consequences of decades of racial inequity in US courts go beyond stark racial imprisonment disparities. The costs of inequality include the subversion of core legal ideals at the heart of liberal democracies, the undermining of faith in a color-blind justice system, and the corrosion of a sense of belonging that encourages compliance with the law ([Cole 1999](#)). The substantial and unexpected reduction of the black–white sentencing gap over the last decade will necessarily translate to greater racial parity in the federal prison system. Whether this shift also translates to changes in the perception of the federal courts or racial divisions in the broader society remains unknown. Much of it depends on the extent to which people notice.

Notes

1. As a point of comparison, in 2006, the black–white sentencing gap among felony offenders in state courts was only 3 mos. (Rosenmerkel, Durose, and Farole, Jr. 2009).
2. It is worth noting that while there were more prisoners in 2009, the incarceration rate peaked in 2007.
3. Although it is worth noting that after reaching a low in 2014 at 1,621 anti-black hate crimes, there has been an uptick in these offenses, up to 1,943 in 2018. This is still considerably less than the decade prior, when there were 2,876 anti-black hate crimes in 2008 (see FBI Hate Crime Statistics, available at <https://www.fbi.gov/services/cjis/ucr/publications#Hate-Crime%20Statistics>).
4. Federal Criminal Case Processing Statistics available at <https://www.bjs.gov/fjsrc/>.
5. By other metrics, such as the drug overdose rate, drug crime appears to have gotten worse over this period (Drug Enforcement Administration 2018).
6. Retrieved from the FBI Crime Data Explorer at <https://crime-data-explorer.fr.cloud.gov/explorer/national/united-states/arrest>.
7. Under §4B1.1 of the guidelines, a “Career Offender” is someone who commits a crime of violence or drug trafficking crime after two prior felony convictions for those crimes.
8. In line with USSC protocols, sentence length is capped at 470 mos. to “more precisely reflect life expectancy of federal criminal defendants and to provide more accurate length of imprisonment information” (USSC 2004, D-6).
9. In supplementary models, I include an interaction between offense severity and criminal history to capture the nonlinearities in the sentencing grid. The results are comparable to those reported in the text.
10. Estimated in *Stata 16* using the *oaxaca* command with the “pooled” option.
11. Estimated in *Stata 16* using the *smithwelch* command. The longitudinal results are substantively identical using the Juhn, Murphy, and Pierce (1993) decomposition method.
12. In 2018, 51% of sex offenders received a federal mandatory minimum sentence, with an average statutory penalty of 59 mos.
13. The actual numbers are as follows: Black offenders received a statutory minimum penalty in 45.5% of cases in 2009 and 30.7% in 2018. For whites, the figures are 26.8% (2009) and 31.2 (2018).
14. Unwarranted racial disparities are those not attributable to legally mandated sentencing factors, such as offense severity and criminal history.
15. Based on an identical decomposition where the dependent variable is the number of months of incarceration (not logged). An alternative approach is to calculate the difference in predicted exponentiated sentences for whites and blacks in the logged model. This yields a nearly identical result [$e^{(3.23)} - e^{(3.07)} = 3.8$]
16. This gap is slightly smaller than the raw disparity reported in figure 1 (5.8 mos.) due to missing data.

17. The U.S. Sentencing Guidelines went into effect 1 November 1987. However, the nationwide implementation of the guidelines did not occur until January 1989 following the Supreme Court ruling upholding the constitutionality of the U.S. Sentencing Commission in *Mistretta v. United States* [488 U.S. 361 (1989)].
18. The average time served for black and white defendants in 2017 was between 60 and 65 mos., compared to less than 30 months in 1987 (Hofer 2019).
19. The First Step Act was signed into law on 21 December 2018, and thus its impact is not reflected in this analysis.
20. Based on the following calculation: $[(.92 - .20)/(.92 - .11) = .89$.
21. In 2018, the demographic breakdown of the federal docket was 21% white, 21% black, 54% Hispanic, and 4% other race.

Supplementary Material

Supplementary material is available at *Social Forces* online.

About the Author

Michael T. Light is an associate professor of sociology at the University of Wisconsin-Madison. His research primarily focuses on crime, punishment, and immigration. His recent work has been published in the *American Journal of Sociology*, the *American Sociological Review*, the *European Sociological Review*, and the *Proceedings of the National Academy of Sciences*.

References

- Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press.
- Baumer, Eric P. 2013. "Reassessing and Redirecting Research on Race and Sentencing." *Justice Quarterly* 30(2): 231–61.
- Bonczar, Thomas P. 2003. *Prevalence of Imprisonment in the U.S. Population, 1974–2001*. Washington, DC: Bureau of Justice Statistics.
- Bronson, Jennifer, and Ann E. Carson. 2019. *Prisoners in 2017*. Bureau of Justice Statistics. Washington, DC: US Department of Justice, Office of Justice Programs.
- Bushway, Shawn D., and Brian Forst. 2013. "Studying Discretion in the Processes that Generate Criminal Justice Sanctions." *Justice Quarterly* 30(2): 199–222.
- Charlesworth, Tessa E. S., and Mahzarin R. Banaji. 2019. "Patterns of Implicit and Explicit Attitudes: I. Long-Term Change and Stability from 2007 to 2016." *Psychological Science* 30(2): 174–92.
- Chavez, Leo C. 2008. *The Latino Threat: Constructing Immigrants, Citizens, and the Nation*. Palo Alto, CA: Stanford University Press.
- Cole, David. 1999. *No Equal Justice: Race and Class in the American Criminal Justice System*. New York: The New Press.
- Drug Enforcement Administration. 2018. *2018 National Drug Threat Assessment*. Washington DC: U.S. Department of Justice.

- Fischman, Joshua B., and Max M. Schanzenbach. 2011. "Do Standards of Review Matter? The Case of Federal Criminal Sentencing." *The Journal of Legal Studies* 40(2): 405–37.
- Fischman, Joshua B., and Max M. Schanzenbach. 2012. "Racial Disparities under the Federal Sentencing Guidelines: The Role of Judicial Discretion and Mandatory Minimums." *Journal of Empirical Legal Studies* 9(4): 729–64.
- Frase, Richard S. 2009. "What Explains Persistent Racial Disproportionality in Minnesota's Prison and Jail Populations?" In *Crime and Justice: A Review of Research*, Vol. 38, edited by Tonry, Michael. Chicago: University of Chicago Press.
- Hofer, Paul J. 2007. "United States v Booker as a Natural Experiment: Using Empirical Research to Inform the Federal Sentencing Debate." *Criminology and Public Policy* 6:433–60.
- Hofer, Paul J. 2019. "Federal Sentencing after Booker". In *American Sentencing: What Happens and Why?*, edited by Tonry, Michael. Chicago: University of Chicago Press, 137–86.
- Holder, Eric. 2010. *Memorandum to All Federal Prosecutors: Department Policy on Charging and Sentencing*. Washington, DC: Office of the Attorney General.
- Holder, Eric. 2013a. *Attorney General Eric Holder Delivers Remarks at the Annual Meeting of the American Bar Association's House of Delegates*. San Francisco, CA: Office of Public Affairs at the US Department of Justice. Accessed Monday 12 August 2013. <https://www.justice.gov/opa/speech/attorney-general-eric-holder-delivers-remarks-annual-meeting-american-bar-associations>.
- Holder, Eric. 2013b. *Memorandum to the United States Attorneys and Assistant Attorney General for the Criminal Division: Department Policy on Charging Mandatory Minimum Sentences and Recidivist Enhancements in Certain Drug Cases*. Washington, DC: Office of the Attorney General.
- Ingraham, Christopher. 2017, November 16. "Black Men Sentenced to More Time for Committing the Exact Same Crime as a White Person, Study Finds." *Washington Post* Accessed 13 January 2018. Retrieved from <https://www.washingtonpost.com/news/wonk/wp/2017/11/16/black-men-sentenced-to-more-time-for-committing-the-exact-same-crime-as-a-white-person-study-finds/>.
- Johnson, Derrick. 2019. "Forward". In *Ending Mass Incarceration: Ideas from Today's Leaders*, edited by Chettiar, Inimai and Raghavan, Priya. Brennan Center for Justice at the New York School of Law, xi–iii. Accessed 3 March 2020. https://www.brennancenter.org/sites/default/files/2019-08/Report_EndingMassIncarceration_2.pdf; New York, NY: Brennan Center for Justice at the New York School of Law.
- Johnson, Rucker C., and Steven Raphael. 2012. "How Much Crime Reduction Does the Marginal Prisoner Buy?" *Journal of Law & Economics* 55(2): 275–310.
- Juhn, Chinhui, Kevin M. Murphy, and Brooks Pierce. 1993. "Wage Inequality and the Rise in Returns to Skill." *Journal of Political Economy* 101(3): 410–42.
- Kang, Jerry, Mark Bennett, Devon Carbado, Pam Casey, Nilanjana Dasgupta, David Faigman, Rachel Godsil, Anthony G. Greenwald, Justin Levinson, and Jennifer Mnookin. 2012. "Implicit Bias in the Courtroom." *UCLA Law Review* 59:1124–86.
- Kang-Brown, Jacob, Eital Schattner-Elmaleh, and Oliver Hinds. 2019. *People in Prison in 2018*. New York: Vera Institute of Justice.
- Kennedy, Randall. 1997. *Race, Crime, and the Law*. New York: Vintage Books.
- King, Ryan D., and Michael T. Light. 2019. "Have Racial and Ethnic Disparities in Sentencing Declined?" In *American Sentencing: What Happens and Why?* edited by Michael Tonry, pp. 365–437. Chicago: University of Chicago Press.
- Lynch, Mona. 2016. *Hard Bargains: The Coercive Power of Drug Laws in Federal Court*. New York, NY: Russell Sage Foundation.
- McDonald, Douglas C., and Kenneth E. Carlson. 1993. *Sentencing in the Federal Courts: Does Race Matter?* Bureau of Justice Statistics. Washington, DC: US Department of Justice, Office of Justice Programs.

- Mitchell, Ojmarrh. 2005. "A Meta-Analysis of Race and Sentencing Research: Explaining the Inconsistencies." *Journal of Quantitative Criminology* 21(4): 439–66.
- National Research Council. 2014. *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. Washington, DC: The National Academies Press.
- Neumark, D. 1988. "Employers' Discriminatory Behavior and the Estimation of Wage Discrimination." *Journal of Human Resources* 23:279–95.
- Oaxaca, R. 1973. "Male–Female Wage Differentials in Urban Labor Markets." *International Economic Review* 14:693–709.
- Pinker, Steven. 2018. *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress*. New York: Penguin.
- Provine, Doris Marie. 2011. "Race and Inequality in the War on Drugs." *Annual Review of Law and Social Science* 7:41–60.
- Raphael, Steven, and Michael A. Stoll. 2013. *Why Are So Many Americans in Prison?* New York: Russell Sage Foundation.
- Rehavi, M. Marit, and Sonja B. Starr. 2014. "Racial Disparity in Federal Criminal Sentences." *Journal of Political Economy* 122(6): 1320–54.
- Reitz, Kevin R., and Cecelia M. Klingele. 2019. "Model Penal Code: Sentencing—Workable Limits on Mass Incarceration". In *American Sentencing: What Happens and Why?*, edited by Tonry, Michael. Chicago: University of Chicago Press, 255–312.
- Rosenmerkel, Sean, Matthew Durose, and Donald Farole Jr.. 2009. *Felony Sentences in State Courts, 2006 – Statistical Tables*. Bureau of Justice Statistics. Washington, DC: US Department of Justice, Office of Justice Programs.
- Sabol, William J., Thaddeus L. Johnson, and Alexander Caccavale. 2019. *Trends in Correctional Control by Race and Sex*. Washington, D.C.: Council on Criminal Justice.
- Schanzenbach, Max M., and Emerson H. Tiller. 2007. "Strategic Judging under the U.S. Sentencing Guidelines: Positive Political Theory and Evidence." *The Journal of Law, Economics, and Organization* 23(1): 24–56.
- Sessions, Jeff. 2017. *Memorandum for All Federal Prosecutors: Department Charging and Sentencing Policy*. DC. Office of the Attorney General: Washington.
- Smith, James P., and Finis R. Welch. 1989. "Black Economic Progress after Myrdal." *Journal of Economic Literature* 27(2): 519–564.
- Starr, Sonja B., and Marit M. Rehavi. 2013. "Mandatory Sentencing and Racial Disparity: Assessing the Role of Prosecutors and the Effects of Booker." *The Yale Law Journal* 123(1): 1–80.
- Steffensmeier, Darrell, Jeffery Ulmer, and John Kramer. 1998. "The Interaction of Race, Gender, and Age in Criminal Sentencing: The Punishment Cost of Being Young, Black, and Male." *Criminology* 36(4): 763–98.
- The Sentencing Project. 2015. *Black Lives Matter: Eliminating Racial Disparity in the Criminal Justice System*. DC: Washington.
- Tonry, Michael. 1995. *Malign Neglect: Race, Crime, and Punishment in America*. New York: Oxford University Press.
- Tonry, Michael. 2011. *Punishing Race: A Continuing American Dilemma*. New York: Oxford University Press.
- Tyler, Tom R. 1990. *Why People Obey The Law*. New Haven: Yale University Press.
- Ulmer, Jeffery, Noah Painter-Davis, and Leigh Tinik. 2016. "Disproportional Imprisonment of Black and Hispanic Males: Sentencing Discretion, Processing Outcomes, and Policy Structures." *Justice Quarterly* 33(4): 642–81.

- U.S. Sentencing Commission. 2004. *Fifteen Years of Guidelines Sentencing: An Assessment of How Well the Federal Criminal Justice System is Achieving the Goals of Sentencing Reform*. Washington, DC: US Sentencing Commission.
- United States Sentencing Commission. 2018. *Guidelines Manual*. DC: Washington.
- Western, Bruce. 2006. *Punishment and Inequality in America*. New York: Russell Sage.
- Yang, Crystal. 2014. "Have Inter-Judge Sentencing Disparities Increased in an Advisory Guidelines Regime? Evidence From Booker" *New York University Law Review* 89(4): 1268–1342.
- Yang, Crystal S. 2015. "Free at Last? Judicial Discretion and Racial Disparities in Federal Sentencing." *Journal of Legal Studies* 44(1): 75–111.