

Misjudging in Judging: The Role of Cognitive Biases in Shaping Judicial Decisions

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I. INTRODUCTION

Commenting on Judge Persky's six-month sentence for Brock Turner, Chanel Miller—known previously to the world as the victim “Emily Doe”—poses a question: “Instead of a nineteen-year-old Stanford athlete, let's imagine a Hispanic nineteen-year-old working in the kitchen of the fraternity commits the same crime. Does this story end differently?”¹ All actors involved in an eventual sentencing decision are susceptible to cognitive biases, from the police who make the initial arrest² to the prosecutor that brings the charges,³ to the jurors.⁴ Judges are susceptible to the same cognitive errors as all other actors.⁵ This Article explores cognitive biases in the context of judicial decisions, with a focus on racial disparities.

Part II of this Article will describe the prevalence of racial disparities in U.S. sentencing decisions and how those disparities impact society. While this Article focuses only on sentencing and judges' role in determining what penalties to impose, it must be noted that racial

¹ CHANEL MILLER, KNOW MY NAME: A MEMOIR 282 (2020).

² See, e.g., Daniel P. Mears et al., *Thinking Fast, Not Slow: How Cognitive Biases May Contribute to Racial Disparities in the Use of Force in Police-Citizen Encounters*, 53 J. CRIM. JUST. 12 (2017); see also Michael R. Smith & Geoffrey P. Alpert, *Explaining Police Bias: A Theory of Social Conditioning and Illusory Correlation*, 34 CRIM. JUST. & BEHAV. 1262 (2007).

³ See, e.g., Sonja B. Starr & M. Marit Rehavi, *Racial Disparity in Federal Criminal Sentences*, 122 J. POL. ECON. 1320, 1323 (2014).

⁴ See generally Brian H. Bornstein & Edie Greene, *Jury Decision Making: Implications for and from Psychology*, 20 CURRENT DIRECTIONS PSYCHOL. SCI. 63 (2011); Heather M. Kleider et al., *Deciding the Fate of Others: The Cognitive Underpinnings of Racially Biased Juror Decision Making*, 139 J. GEN. PSYCHOL. 175 (2012); Robert J. MacCoun, *Experimental Research on Jury Decision-Making*, 244 SCIENCE 1046 (1989). Juror biases have been documented not only in social science and legal research, but it has also been portrayed in popular media in films like *Twelve Angry Men*. TWELVE ANGRY MEN (Orion-Nova Production 1957).

⁵ Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 819–21 (2001).

disparities occur in all facets of the criminal justice system.⁶ Blacks are more likely to be arrested than whites.⁷ After the arrest, blacks are more likely to be convicted than whites.⁸ Upon conviction, they are more likely to receive longer sentences.⁹ The racial disparities snowball in the system, ultimately culminating in the sentencing.

In Part III, this Article explores irrationality, cognitive biases in human decision-making, and some methods used to counteract this human irrationality. Each section within this part will detail different types of cognitive biases that humans—and particularly judges—can experience when making decisions.

II. RACIAL DISPARITY IN SENTENCING AND ITS SOCIETAL IMPACT

The presence of discretionary decisions and disadvantageous policies contribute to racial disparities in criminal sentencing decisions.¹⁰ These disparities begin long before judges enter the picture. Prosecutors have the discretion to use mandatory minimums for certain types of crimes.¹¹ This effectively transfers the power from judges to prosecutors.¹² All else being equal, federal prosecutors are 1.75 times more likely to bring a charge with a mandatory minimum on a black man than on a white man.¹³ The decision to use a mandatory minimum alone explains “more than half of the black-white sentence disparities not otherwise explained by pre-charge

⁶ See generally SENTENCING PROJECT, REPORT OF THE SENTENCING PROJECT TO THE UNITED NATIONS SPECIAL RAPPORTEUR ON CONTEMPORARY FORMS OF RACISM, RACIAL DISCRIMINATION, XENOPHOBIA, AND RELATED INTOLERANCE: REGARDING RACIAL DISPARITIES IN THE UNITED STATES CRIMINAL JUSTICE SYSTEM 2–11 (2018) (discussing racial disparities in policing, pretrial detention, sentencing, parole, and the collateral consequences of having a criminal record), <https://www.sentencingproject.org/publications/un-report-on-racial-disparities/>.

⁷ *Id.* at 2–6.

⁸ *Id.* at 6–8.

⁹ *Id.* See *infra* Section II.A for a discussion of how cognitive bias contributes to racial disparities in sentencing decisions.

¹⁰ See SENTENCING PROJECT, *supra* note 6, at 2–11.

¹¹ Philip Oliss, *Mandatory Minimum Sentencing: Discretion, the Safety Valve, and the Sentencing Guidelines*, 63 U. CIN. L. REV. 1851, 1854–55 (1995).

¹² *Id.* at 1854 (“[M]andatory minimums result in ‘de facto sentencing by police and prosecutors.’” (quoting *United States v. Williams*, 746 F. Supp. 1076, 1082 (C.D. Utah 1990))).

¹³ Starr & Rehavi, *supra* note 3, at 1323.

characteristics.”¹⁴ In addition, drug-free school zones and inadequate funds for indigent defense disproportionately impact blacks in sentencing.¹⁵

The first section of this part will provide empirical evidence on sentencing disparities between black and white defendants. The subsequent section will explain the impact of those disparities in shaping the wider narrative of blacks’ mistrust of the police and their negative consequences.

A. *The Evidence of Racial Bias in Criminal Sentencing*

For many years, researchers have found evidence of disparities in sentencing decisions between defendants of different races.¹⁶ The biases are not limited to one actor in the sentencing process.¹⁷ Empirical evidence shows that everyone—prosecutors,¹⁸ judges,¹⁹ and juries²⁰—has their own set of biases. This also does not account for the discriminatory roles that others, such as police and investigators, can play in the sentencing

¹⁴ *Id.*

¹⁵ SENTENCING PROJECT, *supra* note 6, at 8.

¹⁶ Pamela G. Alexander, *Inequality in Sentencing: Is Race a Factor in the Criminal Justice System?*, 17 L. & INEQ. 233, 233 (1999).

¹⁷ Ken White, *6 Reasons Paul Manafort Got Off So Lightly*, ATLANTIC (March 9, 2019), <https://www.theatlantic.com/ideas/archive/2019/03/what-manafort-sentence-reveals/584452/>.

¹⁸ *See, e.g.*, Alafair S. Burke, *Prosecutorial Passion, Cognitive Bias, and Plea Bargaining*, 91 MARQ. L. REV. 183 (2007) (examining the influence of cognitive bias on prosecutorial discretion in plea bargaining); Besiki L. Kutateladze et al., *Cumulative Disadvantage: Examining Racial and Ethnic Disparity in Prosecution and Sentencing*, 52 CRIMINOLOGY 514 (2014) (examining the effect of prosecutorial racial bias in the criminal process); Tanya Kateri Hernandez, Note, *Bias Crimes: Unconscious Racism in the Prosecution of “Racially Motivated Violence,”* 99 YALE L.J. 845 (1990) (examining the influence of racial bias on prosecutorial charging decisions in cases involving racially motivated violence). *See generally* Robert J. Smith & Justin D. Levinson, *The Impact of Implicit Racial Bias on the Exercise of Prosecutorial Discretion*, 35 SEATTLE U. L. REV. 795 (2012) (discussing the various ways in which implicit bias may influence prosecutorial discretion).

¹⁹ *See, e.g.*, LAWRENCE BAUM, JUDGES AND THEIR AUDIENCES: A PERSPECTIVE ON JUDICIAL BEHAVIOR (2008); LEE EPSTEIN & JACK KNIGHT, THE CHOICES JUSTICES MAKE (1998); LEE EPSTEIN ET AL., THE BEHAVIOR OF FEDERAL JUDGES: A THEORETICAL AND EMPIRICAL STUDY OF RATIONAL CHOICE (2013); THE ROUTLEDGE HANDBOOK OF JUDICIAL BEHAVIOR (Robert Howard & Kirk Randazzo eds., 2018); *cf.* Anna Spain Bradley, *The Disruptive Neuroscience of Judicial Choice*, 9 U.C. IRVINE L. REV. 1 (2018) (using neuroscience to explain how judges are always influenced by their implicit biases and other cognitive intuitions when making legal decisions).

²⁰ *See, e.g.*, Bornstein & Greene, *supra* note 4; Kleider et al., *supra* note 4; MacCoun, *supra* note 4.

decision.²¹ The different actors contribute to these disparities in different ways. Prosecutors are more likely to seek mandatory minimums for black suspects than white suspects of the same crime.²² Mandatory minimums are sentencing guidelines that impose a minimum amount of time for specific crimes, such as drug-related crimes.²³ Juries are likewise biased in making decisions, such as improperly discounting mitigating evidence to favor a death sentence when the criminal defendant is black.²⁴

Members of different demographic groups generally receive different sentences for commensurate crimes.²⁵ According to a 2017 United States Sentencing Commission report, men receive longer sentences than women, and non-whites receive longer sentences than whites.²⁶ The report is based on a series of multivariate analyses.²⁷ The analyses control for additional non-sentencing factors to ensure a fair comparison between offenders in similar situations.²⁸ The control variables limit the analysis to show what factors, such as race and gender, may contribute to the differences in sentencing decisions involving similarly situated offenders.²⁹ The report found that black male offenders received 19.1% more time in jail than their white male counterparts between fiscal years 2012 and 2016.³⁰

The report also measured other demographic differences in sentencing, though none were as stark as the disparate sentences between black males and white males. For the same time period, Hispanic males received sentences that were 5.3% longer than their white male

²¹ See generally ABBE SMITH ET AL., BEYOND THE RODNEY KING STORY: AN INVESTIGATION OF POLICE CONDUCT IN MINORITY COMMUNITIES (Charles J. Ogletree, Jr., ed., 1994) (surveying the perspectives of criminal justice experts, police officials, community leaders, and the public and concluding that racial biases play a central role in the operation of the criminal justice system).

²² See Starr & Rehavi, *supra* note 3, at 1320.

²³ See Oliss, *supra* note 11, at 1852.

²⁴ See, e.g., Mona Lynch & Craig Haney, *Looking Across the Empathic Divide: Racialized Decision Making on the Capital Jury*, 2011 MICH. ST. L. REV. 573, 583–85, 603–04.

²⁵ U.S. SENTENCING COMM'N, DEMOGRAPHIC DIFFERENCES IN SENTENCING: AN UPDATE TO THE 2012 BOOKER REPORT 8 (2017), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2017/20171114_Demographics.pdf.

²⁶ See *id.* at 2.

²⁷ *Id.* at 3.

²⁸ *Id.*

²⁹ See *id.*

³⁰ *Id.* at 2.

counterparts.³¹ Regardless of race, females generally received shorter sentences than males for the same crime.³² The analysis did not include any direct comparisons of white females to black or Hispanic females. Instead, the analysis compared white, black, and Hispanic females to white males and found minimal differences between each of those comparisons.³³ This may suggest that race is more important in sentencing men than it is for women. However, another possible explanation is in the smaller sample size; fewer females commit crimes than males.³⁴ Because there is a smaller sample size within the female group, it is less likely that a true relationship of racial disparity in sentencing would show as statistically significant (and therefore included in the findings). Consequently, the differences between female sentences may not be detected because of the smaller sample size. Therefore, the minimal differences in sentence lengths between different racial groups for females may be explained by the smaller sample size or a true lack of racial disparity.

Some studies have found that increased judicial discretion is also correlated with more racial disparity in sentencing. Congress adopted the then-mandatory U.S. Sentencing Guidelines through the Sentencing Reform Act (SRA) of 1984 to increase uniformity and fairness in sentencing.³⁵ Two decades later, in *United States v. Booker*,³⁶ the Supreme Court held that treating the federal sentencing guidelines as mandatory was unconstitutional.³⁷ The Court explained that to be constitutional the guidelines must be advisory rather than required.³⁸ After *Booker*, sentencing disparities between otherwise similar black and white criminal defendants

³¹ *Id.* at 8.

³² *Id.* at 7.

³³ *Id.* at 2.

³⁴ See Fed. Bureau of Investigation, Ten-Year Arrest Trends by Sex, 2008–2017, FBI: UCR (2018), <https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017/tables/table-33>.

³⁵ Sentencing Reform Act of 1984, Pub. L. 98–473, 98 Stat. 1987 (codified as amended at 18 U.S.C. §§ 3551–3559 (2019)).

³⁶ 543 U.S. 220 (2005).

³⁷ *Booker*, 543 U.S. at 245–46.

³⁸ *Id.* at 233 (“If the Guidelines as currently written could be read as merely advisory provisions that recommended, rather than required, the selection of particular sentences in response to differing sets of facts, their use would not implicate the Sixth Amendment The Guidelines as written, however, are not advisory; they are mandatory and binding on all judges.”).

became greater.³⁹ The removal of the mandatory sentencing guidelines granted judges more discretion.⁴⁰ The United States Sentencing Commission conducted a multivariate study after *Booker* to assess the impact of the decision.⁴¹ The study showed that black offenders received sentences 4.9% higher than white offenders, an association that was not found in the period immediately before *Booker*.⁴² This indicates that post-*Booker* increased judicial discretion increased racial disparity in sentencing decisions.⁴³ In addition, removing the mandatory sentencing guidelines increased prosecutors' use of mandatory minimums for blacks.⁴⁴ This suggests that more judicial discretion in the post-*Booker* era created more margin for discrimination. However, other studies have reached the opposite conclusion, that there is “no evidence that racial disparity has increased since Booker, much less because of Booker. Unexplained racial disparity remains persistent, but does not appear to have increased following the expansion of judicial discretion.”⁴⁵ The conflicting post-*Booker* findings indicate that judicial discretion cannot alone explain racial disparity in sentencing decisions. Other factors, such as cognitive biases, could explain why the disparity exists at all.

B. *The Negative Societal Impact of Racial Disparity in the Criminal Justice System*

Setting aside the blatant racial issues in police brutality, which are beyond the scope of this Article, racial disparities in sentencing feed into

³⁹ Crystal S. Yang, *Free at Last? Judicial Discretion and Racial Disparities in Federal Sentencing* (Coase-Sandor Inst. for Law & Econ., Working Paper No. 661, 2013).

⁴⁰ See *infra* Section IV.A.

⁴¹ U.S. SENTENCING COMM'N, FINAL REPORT ON THE IMPACT OF *United States v. Booker* ON FEDERAL SENTENCING, at viii, 84 (2006), https://www.ussc.gov/sites/default/files/pdf/news/congressional-testimony-and-reports/submissions/200603-booker/Booker_Report.pdf.

⁴² *Id.*

⁴³ See *Fact Sheet: The Impact of United States v. Booker on Federal Sentencing*, U.S. DEP'T OF JUSTICE (Mar. 15, 2006), https://www.justice.gov/archive/opa/docs/United_States_v_Booker_Fact_Sheet.pdf.

⁴⁴ See Yang, *supra* note 39, at 3.

⁴⁵ Sonja Starr & M. Marit Rehani, *Mandatory Sentencing and Racial Disparity: Assessing the Role of Prosecutors and the Effects of Booker*, 123 YALE L.J. 2 (2013).

different races' perception and trust of the criminal justice system.⁴⁶ Fifty percent of blacks think that the higher incarceration rate of blacks is due to racism, compared to nineteen percent of whites.⁴⁷ Blacks also report lower levels of confidence in the police, are more likely to question the honesty and ethics of police officers, and are more likely to believe that police treat them unfairly.⁴⁸ Additional research further substantiates these beliefs—police officers really do treat blacks differently than whites.⁴⁹ By observing police interactions from body cameras, researchers found through computational linguistic analysis that “[p]olice officers speak significantly less respectfully to black than to white community members in everyday traffic stops, even after controlling for officer race, infraction severity, stop location, and stop outcome.”⁵⁰

Unsurprisingly, blacks are less likely to call the police for help.⁵¹ Many avoid calling the police at the risk of their own safety because they fear that calling the police would worsen matters.⁵² This not only robs the black community of an important aspect of living in a democracy—that of protection and the ability to call for help from local law enforcement—but also may lead to a perpetuating cycle of increased violence caused by a

⁴⁶ See, e.g., Monica Anderson, *Vast Majority of Blacks View the Criminal Justice System as Unfair*, PEW RESEARCH CTR. (Aug. 12, 2014), <https://www.pewresearch.org/fact-tank/2014/08/12/vast-majority-of-blacks-view-the-criminal-justice-system-as-unfair/> (showing through a survey that blacks are more likely than whites to say that they faced unfair treatment in dealing with police or in the courts).

⁴⁷ Frank Newport, *Gallup Review: Black and White Attitudes Toward Police*, GALLUP (Aug. 20, 2014), <https://news.gallup.com/poll/175088/gallup-review-black-white-attitudes-toward-police.aspx> (noting survey responses to the question: “On the average, black males are more likely to go to prison than white males. Do you think this is mostly due to discrimination against blacks, or is it mostly due to something else?”).

⁴⁸ *Id.*

⁴⁹ See Rob Voigt et al., *Language from Police Body Camera Footage Shows Racial Disparities in Officer Respect*, 114 PROC. NAT’L ACAD. SCI. 6521, 6521 (2017).

⁵⁰ *Id.*

⁵¹ See, e.g., Adam Harris, *When Calling the Police Is a Privilege*, ATLANTIC (April 21, 2018), <https://www.theatlantic.com/politics/archive/2018/04/when-calling-the-police-is-a-privilege/558608/> (citing MATTHEW DUROSE & LYNN LANGTON, U.S. DEP’T OF JUSTICE, REQUESTS FOR POLICE ASSISTANCE, 2011 (2013), <https://www.bjs.gov/content/pub/pdf/rpa11.pdf>).

⁵² *Id.*

reluctance to call the police.⁵³ These factors essentially obviate the benefits of police presence for black Americans.⁵⁴

III. JUDGES ARE ALSO HUMAN: COGNITIVE BIASES IN JUDICIAL DECISION-MAKING

The emerging field of behavioral economics explores human behavior in decision-making and counters the foundational assumption of classical economics that people behave rationally.⁵⁵ From valuing something more just because we own it,⁵⁶ to giving biased estimates of numbers because of exposure to an initial arbitrary numerical starting point,⁵⁷ the human brain is a bastion of irrationality. Far from being rational *homo economicus*, *homo sapiens* and their brains are prone to judgment errors because of evolution.⁵⁸ People use cognitive shortcuts or rules of thumb—also known as heuristics—to solve problems or to make decisions.⁵⁹ Human brains have limited capacity, and heuristics help the cognitive motors run more efficiently.⁶⁰ While a necessary evolutionary adaptation for more intuitive and faster thinking, heuristics also create biases and errors that can taint decision-making.⁶¹

⁵³ *Id.*

⁵⁴ See Doug Dennis, *40 Percent of Black Americans Distrust the Criminal Justice System: Why I'm One of Them*, VOX (Dec. 21, 2016, 8:00 AM), <https://www.vox.com/first-person/2016/12/21/13854666/criminal-justice-police-distrust>.

⁵⁵ See, e.g., Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476 (1998) (describing “bounds” on human behavior that question the central ideas of utility maximization, stable preferences, rational expectations, and optimal processing of information,” all of which are assumptions that classical economics rely upon).

⁵⁶ Daniel Kahneman et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991).

⁵⁷ Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1128 (1974).

⁵⁸ See, e.g., DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2011). See generally Laurie R. Santos & Alexandra G. Rosati, *The Evolutionary Roots of Human Decision Making*, 66 ANN. REV. PSYCHOL. 321 (2015).

⁵⁹ See, e.g., Bradley, *supra* note 19, at 14 (explaining that heuristics “are cognitive strategies or mental shortcuts we use in the face of complex or incomplete information to make decision-making easier”). For an in-depth discussion of heuristics, see generally KAHNEMAN, *supra* note 58.

⁶⁰ See Tversky & Kahneman, *supra* note 57, at 1124 (explaining how heuristics “reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations”).

⁶¹ See *id.*

More specifically, flaws and biases in decision-making apply in legal settings, and these biases extend to judges.⁶² In the United States, judges are responsible for deciding the appropriate punishment for a criminal defendant.⁶³ Legal formalists espouse the idea that “law is reason free from passion,”⁶⁴ and maintain that judges are supposed to be impartial. However, judges are influenced by their own cognitive flaws and external influences.⁶⁵ For instance, in an intracity survey released in January 2019 the United States Sentencing Commission found that “[i]n most cities, the length of a defendant’s sentence increasingly depends on which judge in the courthouse is assigned to his or her case.”⁶⁶ Subjectivity pervades judges’ sentencing decisions; that sentences are inconsistent within a single courthouse suggests the opposite of impartiality in judges’ sentencing decisions.

Heuristics help make or expedite decisions, but they do so at the expense of serious cognitive errors.⁶⁷ These cognitive errors occur in many different professional contexts.⁶⁸ For example, doctors use heuristics to make diagnoses, sometimes to the detriment of patients.⁶⁹ Likewise, judges also make errors when taking mental shortcuts. Judges make decisions under uncertainty and do not use all the information available to them

⁶² See Guthrie et al., *supra* note 5, at 819–21; see also Gregory S. Parks, *Judicial Recusal: Cognitive Biases and Racial Stereotyping*, 18 N.Y.U. LEGIS. & PUB. POL’Y 681, 696 (2015) (“Judges are human. They suffer from the same frailties, flaws, and foibles that the rest of us do. That includes being subject to a whole host of cognitive biases.”).

⁶³ See, e.g., Offices of the U.S. Attorneys, *Justice 101: Sentencing*, DEP’T OF JUSTICE, <https://www.justice.gov/usao/justice-101/sentencing> (last visited May 9, 2020).

⁶⁴ Aristotle, as quoted in LEGALLY BLONDE (Metro-Goldwyn-Mayer 2003).

⁶⁵ See generally Bradley, *supra* note 19 (challenging the widely held presumption that judges are capable of impartial decision-making).

⁶⁶ U.S. SENTENCING COMM’N, INTRA-CITY DIFFERENCES IN FEDERAL SENTENCING PRACTICES: FEDERAL DISTRICT JUDGES IN 30 CITIES, 2005–2017, at 29 (2019), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2019/20190108_Intra-City-Report.pdf.

⁶⁷ Tversky & Kahneman, *supra* note 57, at 1124 (“In general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors.”).

⁶⁸ Guthrie et al., *supra* note 5, at 782–83 (“Empirical studies demonstrate that cognitive illusions plague assessments that many professionals, including doctors, real estate appraisers, engineers, accountants, options traders, military leaders, and psychologists, make.”).

⁶⁹ See generally JEROME GROOPMAN, HOW DOCTORS THINK (2007) (discussing how doctors make decisions regarding their patients).

when making a certain decision.⁷⁰ The following sections discuss heuristics and other external factors that are particularly salient or ostensibly applicable to judicial decisions that may impact race in criminal sentencing.

A. Anchoring

Anchoring occurs when people base subsequent judgments on previously-given information, even if those initial starting points are irrelevant.⁷¹ For example, people who were asked to estimate Gandhi's age gave higher numbers when they were first exposed to the number 115 than if they were initially exposed to the number 35.⁷² This suggests that the initial starting point influenced the subsequent estimate and biased the estimate towards the initial value.⁷³ The danger of anchoring is that even if people recognize the arbitrariness of the initial value, they are still influenced by its presence.⁷⁴ The initial value induces people to relate their estimate to that value and adjust towards it.⁷⁵

Because of the human mind's tendency to anchor, it is unsurprising that anchoring occurs in judicial decision-making.⁷⁶ The most obvious place where anchoring occurs is in settlement agreements.⁷⁷ People are more likely to accept a \$12,000 settlement agreement when their initial anchor was \$2,000 than when it was \$10,000.⁷⁸ Jurors are also impacted by the anchoring bias. When a plaintiff's attorney requests more money for damages, jurors usually award more.⁷⁹

⁷⁰ Eyal Peer & Eyal Gamliel, *Heuristics and Biases in Judicial Decisions*, 49 CT. REV. 114, 117 (2013) (citing Bettina von Helversen & Jörg Rieskamp, *Predicting Sentencing for Low-Level Crimes: Comparing Models of Human Judgment*, 15 J. EXPERIMENTAL PSYCHOL. 375 (2009)).

⁷¹ Tversky & Kahneman, *supra* note 57, at 1128; *see also* Guthrie et al., *supra* note 5, at 784.

⁷² KAHNEMAN, *supra* note 58, at 122–25.

⁷³ Tversky & Kahneman, *supra* note 57, at 1128–30.

⁷⁴ *Id.*

⁷⁵ *Id.* at 1128–30.

⁷⁶ *See generally* Birte Englich et al., *Playing Dice with Criminal Sentences: The Influence of Irrelevant Anchors on Experts' Judicial Decision Making*, 32 PERSONALITY & SOC. PSYCHOL. BULL. 188 (2006).

⁷⁷ Guthrie et al., *supra* note 5, at 789.

⁷⁸ *Id.* at 789–90 (citing Russell Korobkin & Chris Guthrie, *Opening Offers and Out-of-Court Settlements: A Little Moderation May Not Go a Long Way*, 10 OHIO ST. J. ON DISP. RESOL. 1 (1994)).

⁷⁹ *Id.* (citing Korobkin & Gurthrie, *supra* note 78).

Judges also anchor. A survey of 167 magistrate judges in the United States found that judges are as susceptible to anchoring as the general population.⁸⁰ Judges were randomly assigned into “anchor” or “no anchor” groups and then read a paragraph about a hypothetical tort case.⁸¹ The former group received a low anchoring number and were then asked to recommend a compensatory damage award.⁸² The latter group were also asked to recommend a damage award but received no number as a starting point.⁸³ The judges in the “no anchor” group recommended damage awards that were higher than the judges in the “anchor” group, and the differences in the damage awards were statistically significant between the “no anchor” and “anchor” groups.⁸⁴

Anchoring is especially relevant to the numeric component of sentencing.⁸⁵ A study revealed that an initial anchoring number influenced both novice and experienced judges when they were presented with a hypothetical sentencing exercise.⁸⁶ A powerful real-life anchor for a judge is the prosecutor’s proposed sentence.⁸⁷ Studies have shown that the final sentence tends to resemble the one initially requested by the prosecutor or recommended by the probation officer.⁸⁸ This effect exists even if the initial number comes from a source with no legal expertise.⁸⁹ This suggests that an irrelevant initial starting point can impact a judge’s final decision. Moreover, any number the defense proposes cannot mitigate the effect of the prosecution’s initial anchor and is similarly anchored by the initial prosecution number.⁹⁰ Therefore, if any racial bias occurs in a prosecutor’s

⁸⁰ Guthrie et al., *supra* note 5, at 793.

⁸¹ *Id.* at 790–94.

⁸² These judges were exposed to \$75,000, not as an anchoring number for the amount of damages but rather to use that number to rule on a motion and then recommend damages. However, the authors of the study hypothesized that \$75,000 would still serve as the anchor here. *Id.* at 791.

⁸³ *Id.* at 790.

⁸⁴ *Id.* at 791.

⁸⁵ Peer & Gamliel, *supra* note 70, at 117.

⁸⁶ Karen E. Jacowitz & Daniel Kahneman, *Measures of Anchoring in Estimation Tasks*, 21 PERSONALITY & SOC. PSYCHOL. BULL. 1161 (1995).

⁸⁷ Birte English & Thomas Mussweiler, *Sentencing Under Uncertainty: Anchoring Effects in the Courtroom*, 31 J. APPLIED SOC. PSYCHOL. 1535, 1537 (2001).

⁸⁸ *Id.*

⁸⁹ *Id.* at 1547.

⁹⁰ Birte English et al., *The Last Word in Court: A Hidden Disadvantage for the Defense*, 29 L. & HUM. BEHAV. 705, 714–15 (2005).

initial sentencing proposal, it will likely influence the judge's final sentencing decision because of anchoring.

B. *Framing*

Framing occurs when people make different decisions when the same thing is characterized as a gain or a loss.⁹¹ When participants of a study were shown the exact same probability, they chose differently depending on how it was framed—in this case, whether it was framed as life or death.⁹² People were asked to choose between two different treatments for an imaginary disease expected to kill 600 people.⁹³ The first group of participants were presented with two alternative treatment programs to combat the disease: Program A would save 200 people and Program B would have a one-third probability that 600 people would be saved and a two-thirds probability that no one would be saved.⁹⁴ Seventy-two percent of the respondents in the first group chose Program A, which is risk averse and has more certainty of saving 200 lives than its equivalent expected value.⁹⁵ A second group of participants were presented with two alternative programs: Program C would lead to 400 deaths, and Program D would have a one-third probability that no one would die and a two-thirds probability that 600 people will die.⁹⁶ Program A and Program C actually yield the same result, but only 22% of respondents in the second group chose Program C compared to 72% of respondents in the first group who chose Program A.⁹⁷ This discrepancy shows that the framing of the options led the first group of participants to choose a risk averse (more certain) outcome and the second group of participants to seek a more risk seeking outcome.⁹⁸

⁹¹ Guthrie et al., *supra* note 5, at 784.

⁹² Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 453 (1981).

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *See id.*

⁹⁸ *See id.* at 453, 457–58.

Lawyers who represent the criminal defendant can impact subsequent pleas by providing an initial opinion that impacts later steps.⁹⁹ For example, if the lawyer initially frames the situation as more optimistic, any subsequent plea bargaining will seem like a loss.¹⁰⁰ In contrast, if the lawyer provides a pessimistic picture in the beginning, then subsequent pleas will seem more like a gain.¹⁰¹ In other words, an ultimate decision in part depends on how the information is presented. Because judges are ultimately the arbiters of information, their ultimate decision may be influenced by how the information is framed.

C. Other Extraneous Factors

There are also additional extraneous factors that can influence judicial decisions, which advance the overall conclusion that judges are susceptible to cognitive biases when making decisions. For example, the time of day when the decision is made can impact the outcome.¹⁰² A study of Israeli judges showed that judges tend to have more favorable rulings after a break.¹⁰³ The same study found that judges who made a large proportion of favorable rulings are more likely to rule favorably in a subsequent case.¹⁰⁴ The study also cites many limitations.¹⁰⁵ For example, the researchers could not determine whether the act of resting or eating actually refreshed the judges so that they could make decisions again.¹⁰⁶ However, the paper concluded that the results suggest that “extraneous variables can influence judicial decisions,” which bolsters the growing body of evidence that points to the susceptibility of experienced judges to psychological biases.¹⁰⁷

⁹⁹ Ian Weinstein, *Don't Believe Everything You Think: Cognitive Bias in Legal Decision Making*, 9 CLINICAL L. REV. 783, 799 (2002).

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² Shai Danziger et al., *Extraneous Factors in Judicial Decisions*, 108 PROC. NAT'L ACAD. SCI. 6889, 6889 (2011).

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 6892.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

Other seemingly unrelated factors can also predict sentence length.¹⁰⁸ Using federal sentencing data, a study found, unsurprisingly, that the primary factors that determine criminal sentence lengths in the United States District Courts are the prosecutor’s criminal charge and the defendant’s criminal history.¹⁰⁹ The study also looked at weather data—such as temperature, precipitation or sunshine—in 96 cities for over twenty years from the National Oceanic and Atmospheric Administration (NOAA) database.¹¹⁰ It also examined the results of home games (the study defined “home game” as one occurring in the same geography as the courthouse) from Major League Baseball (MLB), the National Basketball Association (NBA), the National Football League (NFL), the National Hockey League (NHL), and college football.¹¹¹ The study found that temperature “positively correlated with sentence length” and that “the final scores of NHL, MLB and NBA games the day before a trial, do in fact predict criminal sentence length.”¹¹²

Finally, the presence of implicit bias warrants discussion because of the role it can play in judicial decision-making. The Implicit Association Test (IAT) asks people to categorize and associate words or pictures. Studies have shown that people tend to associate the word “black” with “unpleasant” words while associating the word “white” with “pleasant” words.¹¹³ This suggests an implicit bias against blacks.¹¹⁴ Other studies have shown that judges have equal or greater implicit racial biases compared to the general public, and the judges’ IAT scores corresponded to disparities in sentence lengths.¹¹⁵

¹⁰⁸ Daniel L. Chen et al., *Events Unrelated to Crime Predict Criminal Sentence Length* (2016) (unpublished manuscript), https://pdfs.semanticscholar.org/0114/885f04bbd0a7d29823b903f41c85bdad83d2.pdf?_ga=2.40351138.1474564299.1590177377-650015332.1590177377.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 5.

¹¹¹ *Id.* at 5–7.

¹¹² *Id.* at 11–12.

¹¹³ See, e.g., Anthony G. Greenwald et al., *Measuring Individual Differences in Implicit Cognition: The Implicit Association Test*, 74 J. PERSONALITY & SOC. PSYCHOL. 1464, 1164 (1998).

¹¹⁴ See *id.* at 1474.

¹¹⁵ See Mark W. Bennett, *The Implicit Racial Bias in Sentencing: The Next Frontier*, 126 YALE L.J. F. 391, 398–401 (2017).

IV. CONCLUSION

Judges are human. They are as susceptible to the same cognitive errors as all other people, but they also play an important role in deciding the fate of criminal defendants. The alarming inconsistency with which judges decide cases has led to significant discrepancy between sentencing decision of black and white Americans for the same crimes. The racial disparities in sentencing decisions fits into a larger narrative of how the U.S. criminal justice system marginalizes blacks and consequently produces blacks' mistrust in this system. By mistrusting the criminal justice system, blacks are being deprived any potential benefits of the system. Although many variables feed into this overall inequality, cognitive biases—a byproduct of heuristics—play a role and deserve more awareness and solutions to combat the subjectivity that currently exist in the system.