An Empirical Investigation of Arbitrator Race and Gender in U.S. Arbitration

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ABSTRACT: For decades, the United States system of arbitration has been subject to nearly constant public criticism. Calling arbitration a rigged judicial system, consumer and employee rights groups have voiced opposition to the practice of "forced arbitration" whereby millions of Americans are contractually required to resolve disputes in arbitration rather than in litigation. On top of the concerns over the unfairness of forced arbitration itself, recent attention has been drawn to the lack of racial and gender diversity within the arbitrator profession. When women and racially marginalized plaintiffs are forced to arbitrate their employment discrimination or consumer-based claims in the arbitral forum, that they may have no meaningful access to arbitrators that look like them seems additionally problematic.

Scholars in the field have argued back and forth about the root of the diversity problem. Is it a labor supply problem? In other words, are parties to arbitration open to hiring marginalized arbitrators but there are just not enough to choose from? Or is it a labor demand problem? In other words, when women and arbitrators of color are available, are they chosen at rates consistent with their white male counterparts? Or, are both supply and demand problems at work? Because much of the scholarly diversity conversation has been based on anecdotal information and survey data which don't cover the full population of U.S. arbitrators, these basic questions are still unanswered.

This paper contributes to the literature by using an originally-collected data set of arbitrator race, ethnicity and gender from the two largest arbitration firms in the U.S., Judicial Arbitration and Mediation Services ("JAMS") and the American Arbitration Association ("AAA"). The data were collected using public data sources and cutting-edge machine learning techniques. This is the first-ever scholarly effort to empirically estimate the race and ethnicity of arbitrators for both the JAMS and AAA populations. The analysis presents estimates of the demographic profile of the supply of U.S. arbitrators and the demographic profile of the subset of arbitrators that are actually selected to arbitrate—with a special focus on the extent to which under-selection is happening.

The study has four main findings. First, along the supply dimension, women and people of color are underrepresented amongst JAMS arbitrators, both relative to the U.S. population and relative to the population of American lawyers and judges. The extent of the underrepresentation for both groups is significant, though it is more severe for arbitrators of color than for female arbitrators. For AAA arbitrators, I find an even greater degree of under-representation for Black arbitrators.

Second, along the demand dimension, I find different results for JAMS and AAA. For JAMS, I find that, conditional on being selected to arbitrate at least once in the sample period, Asian and Black arbitrators receive fewer cases than their proportional share, and female arbitrators receive slightly more cases than their proportional share. Moreover, arbitrators that were formerly judges receive more cases than their proportional share. For AAA, the selection analysis is hampered by limited data availability. However, the data that I do have suggest that diverse neutrals are selected for cases at a rate that is at or above their proportional share.

Third, given the first two results, my data suggest that diversity issues exist both along the labor supply dimension and the labor demand dimension within U.S. arbitration.

Fourth and finally, I find that future empirical diversity work in arbitration will be severely hindered unless more and better data are available to researchers.

The study concludes by offering concrete and specific recommendations for how and why better data should be collected and made available to the public.

TABLE OF CONTENTS

INTRODUCTION

The need for greater diversity[1] in mandatory arbitration has recently received tremendous public attention. Although, to be fair, mandatory arbitration *generally* has been subject to public scrutiny for some time now, with critics arguing that it is a rigged system. Consumer protection activists assert that millions of consumers, in their everyday purchases of cell phones, groceries, electronics and other consumer goods, regularly forfeit their right to have any future disputes addressed in court[2], often without their knowledge.[3] These mandatory arbitration clauses are hidden deep in the fine print of the purchase agreements that consumers implicitly assent to, just by simply making

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1. A note on terminology: In this paper, I will use the word "diversity" to refer generally to racial, ethnic, and gender diversity. Accordingly, I will use the term "diverse arbitrator" to refer to an arbitrator that is not a white male. "Arbitrators of color" are arbitrators that are non-white and of any gender. Moreover, throughout the paper, I will use the nouns "arbitrator" and "neutral" interchangeably. Finally, I will use the term "jurist" to refer generally to any person that is an arbitrator, lawyer or judge.

2. *See* Scott Medintz, *Forced Arbitration: A Clause for Concern*, CONSUMER REPORTS (Jan. 30, 2020), https://www.consumerreports.org/mandatory-binding-arbitration/forced-arbitration-clause-for-concern [https://perma.cc/V9GW-5V4Q]. *See also* AM. ASS'N FOR JUST., THE TRUTH ABOUT FORCED ARBITRATION 8 (2019); CONSUMER FINANCIAL PROTECTION BUREAU, ARBITRATION STUDY 9 (2015); Imre Stephen Szalai, *The Prevalence of Consumer Arbitration Agreements by America's Top Companies*, 52 U.C. DAVIS L. REV. ONLINE 233, 246 (2019) (estimating that hundreds of millions of consumers are subject to mandatory arbitration agreements); *Mandatory Arbitration Clauses Are Discriminatory and Unfair*, PUBLIC CITIZEN, https://www.citizen.org/article/mandatory-arbitration-clauses-are-discriminatory-and-unfair [https://perma.cc/GE6D-PP9E] (last visited June 27, 2021); *Study Shows That Consumers Are Unaware of and Do Not Understand Forced Arbitration Clauses*, NAT'L ASS'N OF CONSUMER ADVOC. (Jan. 22, 2015) [https://perma.cc/L2RJ-3CNQ](defining forced arbitration as: "mandatory pre-dispute arbitration clauses").

3. Jeff Sovern, Elayne E. Greenberg, Paul F. Kirgis & Yuxiang Liu, *"Whimsy Little Contracts" with Unexpected Consequences: An Empirical Analysis of Consumer Understanding of Arbitration Agreements*, 75 MD. L. REV. 1, 31, 47 (2015) (finding that less than 9% of respondents fully understood that the contract "both provided for arbitration and precluded litigation in court" from an empirical study surveying 668 online respondents who were presented with a sample credit card contract that included a mandatory arbitration clause).

a purchase.[4] At the same time, employee rights groups report that over 60 million American employees are similarly constrained when they, as a term of being hired, must agree to have all future job-related disputes resolved in front of a single arbitrator who is paid by their employer, rather than by a judge or jury of their peers.[5] The mandatory arbitration clauses in employment contracts are typically part of an employee handbook or manual, and as such, rarely come to the attention of a new employee until a dispute arises.[6] According to critics, these arbitration clauses "force" millions of average Americans into an alternative dispute resolution system where adherence to the rules of civil procedure and evidence is not required;[7] where class action is often not allowed;[8] and where the arbitrator's decision is final, binding on all involved parties, and not subject to appeal.[9]

Of late, forced arbitration has come under *even greater* scrutiny as high-profile cases and national news stories have shined a spotlight on the lack of racial and gender diversity amongst U.S. arbitrators—making an already controversial system seem even more illegitimate.[10] In late 2018, entertainment mogul Shawn Carter, known popularly as Jay-Z, successfully halted an arbitration proceeding before the American Arbitration Association ("AAA"), the nation's largest arbitration provider, on the grounds that the list of AAA arbitrators that he was given to choose from, included only two Black arbitrators out of more than 200 candidates.[11] Mr. Carter argued that "the AAA

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4. *See* Medintz, *supra* note 2 ("The clause[s] can appear on product packaging or be buried deep in the warranties, user manuals, or . . . a website's terms of use.").

5. ALEXANDER J.S. COLVIN, ECONOMIC POLICY INSTITUTE REPORT: THE GROWING USE OF MANDATORY ARBITRATION 2 (2017) (". . . 60.1 million American workers no longer have access to the courts to protest their legal employment rights and instead must go to arbitration.").

6. KATHERINE V.W. STONE & ALEXANDER J.S. COLVIN, THE ARBITRATION EPIDEMIC: MANDATORY ARBITRATION DEPRIVES WORKERS AND CONSUMERS OF THEIR RIGHTS 4 (2015) ("Arbitration clauses are also often included in the company orientation and personnel materials a worker receives when beginning a new job. Because these arbitration clauses are usually buried in a sea of boilerplate, many people who are subject to them do not realize they exist or understand their impact.").

7. *See id.* at 5 (explaining a typical arbitration process as: "[t]he arbitrator convenes the hearing and usually begins by explaining that it is an informal proceeding not subject to formal rules of evidence or procedure").

8. *See* Szalai, *supra* note 2, at 234 (finding that, as of its publication, 81 of the top Fortune 100 companies used mandatory arbitration clauses in their dealings with consumers and 78 of those 81 companies (or 96.3%) additionally included class action clauses).

9. STONE & COLVIN, *supra* note 6, at 5 ("Once the arbitrator has ruled, there is no realistic possibility for appeal.").

10. Sarah Rudolph Cole, *Arbitrator Diversity: Can It Be Achieved?*, 98 WASH. U. L. REV. 965, 972 (2021) ("Although arbitration is under fire for a variety of reasons, the lack of diversity in the arbitrator corps unquestionably adds to the perception of arbitration as an unfair and unbalanced process that is geared against 'the little guy,' particularly when that 'little guy' is a woman and/or a member of a minority group.").

11. Pet'r['s] Mem. of Law in Supp. of Order to Show Cause for a TRO and Prelim. Inj. at 9, Carter v. Iconix Brand Grp., Inc., No. 655894/2018 (N.Y. Sup. Ct. Dec. 7, 2018) [hereinafter Pet'r['s] Mem. of Law]. Mr. Carter was initially given the entire New York Large and Complex Litigation roster, a list

lacks any meaningful selection of African-American arbitrators who specialize in complex commercial disputes."[12] As a result, he had no "meaningful opportunity to have [his] claims adjudicated by a neutral decision maker who reflects [his] background and experience,"[13] which denies him "equal protection of the laws" and also violates "New York public policy against discrimination."[14,15] Then, in June of 2020, the National Rifle Association ("NRA") sued the nation's second largest private arbitration firm, Judicial Arbitration and Mediation Services ("JAMS"), to recover fees from an arbitration proceeding that went off the rails after it was discovered that the presiding arbitrator had ties to a white supremacist organization.[16] A year later, in June of 2021, the American Association of Justice ("AAJ") released a study on diversity in arbitration, later covered by CNBC national news, that concluded that arbitration is a place where "white men rule."[17]

To be clear, arbitration providers are also strongly in favor of diversifying the field of arbitration. Specifically, both AAA and JAMS have recently taken significant steps towards recruiting more Black, Indigenous, and people of color (BIPOC) and women arbitrators,[18] and are making institutional changes

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that included over 200 individual arbitrators on it. When Mr. Carter couldn't identify a single Black arbitrator on the list, he and his legal team raised the issue with AAA. In response, AAA provided Mr. Carter with an additional six arbitrators, three of whom were Black. However, one of the three Black arbitrators had a conflict of interest because he was a partner at the firm that was representing the opposing side (Iconix). This left only two Black arbitrators in the pool of eligible arbitrators. *See id.*

12*. Id.* at 5.

13*. Id.* at 7.

14*. Id.* at 6-7.

15.   Ultimately, Mr. Carter dropped the lawsuit after AAA agreed to certain changes. Specifically, AAA agreed to allow the arbitration to be overseen by a three-arbitrator panel rather than a single arbitrator, offered five eligible Black arbitrators for Mr. Carter to choose from, and additionally agreed to supplement the strike list with 11 Black arbitrators that were suggested by Mr. Carter's legal team. Jonathan Stempel, *Jay-Z Wins Fight for African-American Arbitrators in Trademark Cases*, REUTERS (Jan. 30, 2019, 9:58 PM), https://www.reuters.com/article/idUSKCN1PO32T/ [https://perma.cc/7V7M-2GTB].

16.   Complaint at 2-3, Nat'l Rifle Ass'n of America v. JAMS, Inc., No. 2020-CA-003346 (D.C. Super. Ct. July 29, 2020).

17*. See* Megan Leonhardt, *The Huge Diversity Issue Hiding in Companies' Forced Arbitration Agreements*, CNBC (June 7, 2021), https://www.cnbc.com/2021/06/07/arbitrators-are-male-and-overwhelming-white-heres-why-it-matters.html [https://perma.cc/HKX8-EDPJ]. *See also* WHERE WHITE MEN RULE: HOW THE SECRETIVE SYSTEM OF FORCED ARBITRATION HURTS WOMEN AND MINORITIES, AM. ASS'N FOR JUST. (June 2021) [hereinafter *Where White Men Rule*], https://www.justice.org/resources/research/forced-arbitration-hurts-women-and-minorities [https://perma.cc/UZ7D-M2P9].

18*. See Arbitrators & Mediators: Roster Diversity & Inclusion*, AM. ARB. ASS'N, https://www.adr.org/RosterDiversity [https://perma.cc/WF6J-6E3P] (last visited July 28, 2021) (emphasizing AAA's Mission and Vision statement asserts a "shared commitment to a diverse Roster of Arbitrators and Mediators" and is composed of 27% women and minorities, a figure that is increasing. As of November 2023, AAA reports this figure as 30%.); *Diversity and Inclusion Clause for Arbitration Agreements and Contracts*, JAMS, https://www.jamsadr.com/inclusion-clause [https://perma.cc/2ZVA-VZ6E] (last visited July 28, 2021) ("Nearly half of the neutrals who have joined us over the past five years are women and/or diverse.").

designed to improve the odds that diverse arbitrators will be selected by the parties in arbitration.[19] Still, even though there is a clear consensus from all interested parties that arbitration needs more diversity, as a practical matter, there is very little empirical guidance about where and how to begin in terms of fixing this problem. Indeed, the problem is multidimensional. One part of the issue concerns labor supply (i.e.—the field lacks a sufficient number of diverse neutrals), and so recruitment of larger numbers of diverse neutrals is necessary.[20] At the same time, labor demand issues also exist (i.e.—even when diverse neutrals are available, they are not hired by the parties).[21] Because of implicit bias and/or a desire to avoid new arbitrators whose reputations have not yet been established, litigants (or more accurately, their lawyers) are less likely to choose diverse neutrals.[22] In response, some scholars have argued that institutional changes to the arbitration selection procedures are needed.[23]

To shed light on these issues, this paper uses an originally-collected data set of arbitrator race, ethnicity and gender from JAMS and AAA. The data were collected using public data sources and cutting-edge machine learning techniques. This is the first-ever scholarly effort to empirically estimate the race and ethnicity of arbitrators for both the JAMS and AAA populations. Equipped with these data, this paper investigates two commonly discussed issues in the recent conversations about diversity in arbitration: labor supply issues and labor demand issues.

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19. JAMS has a model diversity and inclusion rider that client-businesses can add into their contracts if they so choose. *See* JAMS, *supra* note 8 ("The parties agree that, wherever practicable, they will seek to appoint a fair representation of diverse arbitrators (considering gender, ethnicity and sexual orientation), and will request administering institutions to include a fair representation of diverse candidates on their rosters and list of potential arbitrator appointees."). AAA states on their website that they have "the ability in [their] algorithms to provide arbitrator lists to parties that comprise at least 20% diverse panelists where party qualifications are met." AM. ARB. ASS'N, *supra* note 8. As of November 2023, this number has been updated to 30%.

20. Paige Smith, *Lack of Arbitrator Diversity is an Issue of Supply and Demand*, BLOOMBERG L. (May 15, 2019, 6:04 AM), https://news.bloomberglaw.com/daily-labor-report/lack-of-arbitrator-diversity-is-an-issue-of-supply-and-demand [https://perma.cc/9M84-HG7V].

21. *Id.*; *see also* Michael Z. Green, *Reconsidering Prejudice in Alternative Dispute Resolution for Black Work Matters*, 70 SMU L. REV. 639, 658-59 (2017) (highlighting the lack of diverse neutrals in the ADR system).

22. *See* Michael Z. Green, *Arbitrarily Selecting Black Arbitrators*, 88 FORDHAM L. REV. 2255, 2271-72 (2020) [hereinafter *Arbitrarily Selecting Black Arbitrators*] ("Risk aversion prevented [ADR users' lawyers] from using highly skilled mediators of color, even when those mediators had been identified and relationships had been formed through ACCESS ADR."). *See also* Cole, *supra* note 10, at 970 ("[W]hile party control over arbitrator selection is often seen as a hallmark of arbitration, unbridled party selection may play an integral role in reducing diversity in the arbitrators selected. Among other things, winnowing to a single arbitrator, which the parties often undertake with relatively little information, may lead parties to rely on heuristics that incorporate explicit or implicit biases.")

23. *See* Green, *supra* note 22, at 2278-2285 (arguing in favor of random selection of arbitrators); Cole, *supra* note 10, at 970 (arguing for a limited appointment approach where the arbitration provider would appoint an arbitrator after the parties initially struck unacceptable arbitrator candidates).

First, on the labor supply side, this study seeks to comprehensively estimate the statistical profile of the U.S. arbitrator population. While almost all academic and news-related articles on the topic mention the low diversity in arbitration,[24] no paper has sought to quantitatively measure what the *population* of arbitrators looks like, both along the race/ethnicity[25] and gender dimensions, as well as along other important dimensions (age, education, judicial experience, etc.).[26] Relatedly, this paper seeks to compare the demographic profile of arbitrators with the demographic profile of the U.S. population, as well as the population of other jurists such as lawyers, state judges and federal judges. Much of the discussion concerning the underrepresentation of diverse arbitrators has proceeded without the guidance of a benchmark for what we would expect the level of diversity to be in the absence of discrimination. This comparative analysis seeks to fill that void.

Moving on to labor demand issues, the paper's second objective is to quantitatively assess whether and to what extent diverse neutrals are systematically under-selected by parties for their arbitration matters. Unlike in court cases, parties to arbitration have the unique ability to choose the neutral that will preside over their dispute. If the parties have a preference for white male arbitrators, either because of discrimination or because they are hesitant to put their matter in the hands of a relatively unknown neutral,[27] then supply-side increases in diversity will not be impactful. To investigate this issue, this study not only collected detailed arbitrator demographic records, but then took the next step of matching these arbitrator records with publicly available arbitration

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24. *See, e.g.*, Cole, *supra* note 10, at 969 n.7; Sara Rudolph Cole, *The Lost Promise of Arbitration*, 70 SMU L. REV. 849, 880-81 (2017) (noting that "both minority disputants and one-shot players believe that lack of diversity among arbitrators undermines the integrity of the arbitration process."); DAVID A. HOFFMAN & LAMONT E. STALLWORTH, LEVELING THE PLAYING FIELD FOR WORKPLACE NEUTRALS: A PROPOSAL FOR ACHIEVING RACIAL AND ETHNIC DIVERSITY (2008), http://lamontstallworth.com/Articles/PDFS/Leveling_the_Playing_Field.pdf [https://perma.cc/TS9N-ALHW].

25. Throughout this paper, I will be using the race and ethnicity categories adopted by the CCCP 1281.96 survey. Specifically, I will be using the CCCP survey's terms "Hispanic" and "Hispanic or Latino" instead of the more inclusive and gender-neutral term Latinx. Also, following with the CCCP survey, I will be grouping race and ethnicity categories together as race/ethnicity. Technically race and ethnicity are two distinct categories such that a Hispanic/Latino-identifying person could be, for example, Black or white. However, on the CCCP survey, arbitrators had to choose between Hispanic/Latino, Black and white, as three mutually exclusive categories. Hence, I call the CCCP categories race/ethnicity categories.

26. *See* Maria R. Volpe, *Measuring Diversity in the ADR Field: Some Observations and Challenges Regarding Transparency, Metrics and Empirical Research*, 19 PEPP. DISP. RESOL. L.J. 201, 202-07 (2019) ("Despite the increasing attention given to the topic, there has been an astonishing dearth of research measuring the extent of diversity. There is very little empirically based research from which to measure progress. Much of what is known has come from anecdotal information, what is observable at events, and oft-repeated comments that the practitioner field has been dominated by rosters of mostly white males.").

27. Green, *supra* note 22, at 2270-2274; Cole, *supra* note 10, at 970.

case records by arbitrator name. This matching allows for a demographic analysis of which categories of arbitrators are selected and at what rates.

The analysis in this paper yielded the following findings. First, on supply issues, I find that the population of JAMS and AAA arbitrators is overwhelmingly white and male, and the extent of white-male overrepresentation is greater than what the JAMS and AAA aggregate demographic surveys report.[28] Moreover, my comparative analysis suggests that the population of arbitrators is less diverse than the population of other American jurists (lawyers, federal judges and state judges) and substantially less diverse than the general U.S. population. Women and people of color are both underrepresented relative to these benchmarks, but people of color are underrepresented to a greater extent.

Second, on demand issues, I study selection along two different dimensions. Specifically, I study whether or not a diverse arbitrator is ever selected to arbitrate from the arbitration roster within my five-year sample period (2015-2019) (the ever-selected dimension) and, conditional on ever being selected, I study the frequency with which a diverse arbitrator is selected to arbitrate (the frequency-of-play dimension). Furthermore, I assume that, in the absence of discrimination, all sub-groups of diverse arbitrators would be selected in proportion to their roster share (for the ever-selected dimension) or their expected share conditional on ever being selected (for the frequency-of-play dimension).[29,30] For both JAMS and AAA, on the ever-selected dimension, I find no evidence of under-selection. All groups of diverse arbitrators studied (Asian, Black, Hispanic,[31] and female arbitrators) are selected at a rate that is proportional to their (very low) representation on the arbitrator roster.[32] Second, along the frequency of play dimension, I find different results for JAMS and AAA. For JAMS, I find that, conditional on being selected to arbitrate at least once in the sample period, Asian and Black arbitrators receive fewer cases than their proportional share, and female arbitrators receive slightly more cases than their proportional share. Moreover, arbitrators that were formerly judges receive more cases than their proportional share. For AAA, the selection analysis is hampered by limited data availability.

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28. *See infra* Section VI.A. for a discussion of these surveys.

29. Section VI.B. explains the selection terms used here in greater detail.

30. Of course, there could be various non-discriminatory reasons that arbitrators are selected below (or above) their roster share. Still, the roster rate and expected share are useful starting benchmarks for detecting statistically significant and meaningful differences that merit further explanation.

31. In order to be consistent with the CCCP 1281.96 identity groupings, I use the term "Hispanic" instead of the more inclusive term "Latinx." For a more detailed explanation, see *supra* note 25.

32. The one exception to this is for AAA. For AAA, Black arbitrators are *slightly* over-selected, along the ever-selected dimension, relative to their very low roster rate of 2.76%. Their ever-selected selection rate is 2.96%, a 7% difference.

However, the data that I do have suggest that diverse neutrals are selected for cases at a rate that is at or above their proportional share.

Given the first two results, my data suggest that diversity issues exist both along the labor supply dimension and the labor demand dimension within U.S. arbitration.

The paper is organized as follows: Section II presents a primer on U.S. domestic arbitration—what arbitration is, how pervasive arbitration is within the lives of average Americans, how it works and the dominance of AAA and JAMS within the market of arbitral institutions. Section III discusses the importance of arbitrator diversity, while Section IV summarizes the related literature. Section V introduces the originally-collected data sources. Section VI presents the empirical analysis. Section VII concludes. The tables and figures are provided in Section VIII.

ARBITRATION BASICS

In this section, I will briefly explain the basics of arbitration: what it is, its pervasiveness, how it works in practice, and the prevalence of AAA and JAMS within the market of arbitration providers. Readers who are familiar with the nuts and bolts of arbitration may safely skip this section and proceed directly to section III.

A.   What is Arbitration Generally and How Pervasive is Mandatory Arbitration?

Arbitration is a dispute resolution process that is an alternative to litigation. It is more informal than litigation in its procedures. In arbitration, a single decision-maker called an "arbitrator" hears and resolves disputes rather than a judge or jury. The arbitrator often has, but is not required to have, any legal background. When hearings are held, they take place in business offices or via telephone conferences rather than in an official courtroom. In a conversational manner, and without the usual rules of civil procedure and evidence, the parties present their arguments. Discovery is usually limited and the discussion is closed to the public. In the end, the arbitrator makes a decision that is binding on both parties and not subject to appeal.

Though there are different types of arbitration, this paper only focuses on the two types of arbitration that are most prevalent in the lives of everyday Americans: consumer and employment arbitration.[33] Consumer arbitration

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33. Other types of arbitration include: labor arbitration (arbitration that occurs between a labor union and an employer), securities arbitration (arbitration that occurs between a brokerage firm and an

occurs between a consumer and a business and seeks to resolve disputes over a good or service that the consumer has purchased from the business. In these cases, the sales contracts almost always include a mandatory arbitration clause that requires the consumer to arbitrate any dispute that arises out of the sale in arbitration rather than in court. This mandatory arbitration clause is "take-it or leave-it" meaning that the consumer is not allowed to negotiate the clause; rather, if the consumer prefers not to be bound by arbitration, their only outside option is to forgo the purchase altogether.[34] Mandatory consumer arbitration clauses arise in contracts for a wide variety of goods including mobile phones, credit cards, car sales, and electronics.[35]

Moreover, mandatory arbitration clauses are pervasive in the consumer realm. In a 2019 study published in the UC Davis Law Review Online, Professor Imre Szalai reviewed the consumer contracts from all Fortune 100 companies. Szalai found that 81 of the contracts included mandatory arbitration clauses, and 96% of the 81 contracts additionally included class arbitration waivers which mandate that consumers handle their claims individually, rather than collectively with other similarly-aggrieved consumers. Based on his analysis, Szalai estimates that "at least a majority of the households in the United States (and possibly almost two-thirds) are covered by broad consumer arbitration agreements."[36] The prevalence of mandatory arbitration clauses in e-commerce is even higher; Szalai estimates that more than 60% of online purchases are covered by contracts that include such clauses.[37] A similar study by Consumer Report found that 71 of the 117 (or 61%) most popular consumer brands contain mandatory arbitration clauses.[38] Interestingly, most consumers don't even know that they are subject to these arbitration agreements when they make their purchases (Sovern 2015). Contributing to consumer ignorance is that fact that mandatory arbitration clauses are often hidden in unexpected places. For example, according to Consumer Report, these mandatory

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individual) and judicial arbitration (arbitration between two parties that is mandated by a court before they are allowed to enter litigation). Consumer and employment arbitration are part of what is called contract-based arbitration, or arbitration that arises out of a contract which stipulates arbitration in the case that a dispute arises. Contract-based arbitration is the predominant way in which regular Americans experience arbitration. See *Arbitration*, ADR SERVICES, INC, https://www.adrservices.com/services-2/arbitration/ [https://perma.cc/V6A6-44KF] (explaining contract-based and judicial arbitration) (last visited Nov. 8, 2023); *Arbitration & Mediation: Securities Arbitration—Should You Hire an Attorney?*, FINRA STAFF AND PIABA FOUNDATION (Jan. 3, 2019), https://www.finra.org/investors/insights/securities-arbitration [https://perma.cc/9Y5D-3A2U] (explaining securities arbitration).

34. *See* STONE & COLVIN, *supra* note 6, at 4-5.

35. Barbara Kate Repa, *Arbitration Basics*, NOLO, https://www.nolo.com/legal-encyclopedia/arbitration-basics-29947.html [https://perma.cc/BZ5W-DP79] (last visited July 27, 2021) (reporting that arbitration clauses are found in "many kinds of consumer contracts, including those for credit cards, home repairs, health insurances, telephones, and selling and financing cars.").

36. Szalai, *supra* note 2, at 234.

37. *Id.*

38. *Id.*

arbitration clauses "can appear on packaging or be buried deep in the warranties, user manuals, or . . . a website's terms of use."[39]

The other type of arbitration studied here is employment arbitration. As the name suggests, employment arbitration is between an employee and their employer and typically seeks to resolve disputes over some term of employment such as wages, hours, or benefits. This includes claims of race and gender discrimination and harassment that would otherwise be heard in court under the protection of Title VII of the Civil Rights Act, and with the assistance of discovery procedures that would allow a claimant to uncover a pattern of discriminatory behavior.[40] In most cases, the employee's contract includes a pre-dispute mandatory arbitration clause that requires the employee to resolve any dispute in arbitration rather than court. These mandatory clauses are usually hidden in the thick packet of hiring paperwork that an employee receives on their first day of work, meaning that many employees may not even be aware that they are subject to arbitration. For those employees that do read the fine print, the arbitration clause is non-negotiable and so an employee's only option if they do not like the clause is to find employment elsewhere.

As far as prevalence, according to a 2018 study of employment arbitration by Alexander Colvin, more than 60 million American workers have employment contracts that include mandatory arbitration clauses, and 30.1% of those 60 million workers are additionally covered by class action waivers.[41] Colvin's work also showed that employment-based mandatory arbitration clauses are more common in low-level jobs and "in industries that are disproportionately composed of women workers and in industries that are disproportionately composed of African American workers."[42] Given that many of the potential plaintiffs in forced arbitration are themselves from marginalized groups, it seems especially important to investigate the extent to which the arbitrators themselves mirror the demographics of these plaintiffs.

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39. Medintz, *supra* note 2.

40. STONE & COLVIN, *supra* note 6, at 3-4 ("[A]rbitration may not provide parties with the same extent of discovery that a court would. In certain types of cases, such as employment discrimination claims, it is practically impossible to win without the right to use extensive discovery to find out how others have been treated.").

41. COLVIN, *supra* note 5, at 2.

42*. Id.*

B.   How Does Arbitration Work?

In terms of the nuts and bolts, there are generally six steps that a consumer or employee claimant must go through in filing an arbitration case.[43] These six steps are detailed below:

> 1.   **Consumer/Employee Files a Demand for Arbitration and Pays a Filing Fee:** The process begins when the consumer/employee files a demand for arbitration with the arbitration provider (usually AAA or JAMS).[44],[45] The demand need not be a formal document; a simple, handwritten description of the dispute and the relief sought suffices. The filing fee is generally in line with what it would be in small claims court.[46]

> 2.   **The Business Files an Answer:** After the consumer/employee files their complaint with the arbitration provider, the business respondent files an answer to the complaint responding to the allegations and/or making counterclaims. If the business chooses not to file an answer, the arbitration provider will presume that all alleged claims have been denied.[47]

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43. Jean Murray, *Learn How the Arbitration Process Works*, THE BALANCE (Feb. 24, 2021), https://www.thebalancesmb.com/what-is-the-arbitration-process-how-does-arbitration-work-397420 [https://perma.cc/HA55-7TC8]. The steps provided here closely follow Murray's outline. Note that the steps when the consumer or employee is the respondent are similar, except that the business files the claim and the consumer/employee files the answer. However, that is rare; in more than 80% of the arbitration cases studied here, the consumer/employee was the claimant. Given this, the scenario that is provided in the six steps here present the case of an individual claimant and a business respondent. *See Id.*

44. AM. ARB. ASS'N, CONSUMER ARBITRATION RULES 11 (2014) (explaining the process of starting arbitration under an agreement naming the AAA under rule R-2(a)); AM. ARB. ASS'N, EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES 11 (2009) (explaining the process of initiating arbitration under rule 4(b)(i)); *JAMS Streamlined Arbitration Rules & Procedures*, 5(a)(ii), 7(b) JAMS, https://www.jamsadr.com/rules-streamlined-arbitration/ [https://perma.cc/ZX3S-ULL9] (last visited July 28, 2021) (describing arbitration procedures for JAMS consumer and employment claims under $250,000).

45. Oftentimes, the consumer or employment contract specifies the arbitration provider and, in most cases, that provider is AAA or JAMS. See Section II.C. for more details.

46. For AAA claimants, the fees are $200 (consumer) and $300 (employee). *Consumer Arbitration Rules: Cost of Arbitration*, AM. ARB. ASS'N 1 (2016), https://www.adr.org/sites/default/files/Consumer_Fee_Schedule.pdf [https://perma.cc/64A8-LK5U]; *Employment/Workplace Fee Schedule: Costs of Arbitration*, AM. ARB. ASS'N 1 (2020), https://www.adr.org/sites/default/files/Employment_Fee_Schedule.pdf [https://perma.cc/B9NN-WGJM]. For JAMS claimants, the fees are $250 (consumer) and $400 (employee). *Arbitration Schedule of Fees and Costs,* JAMS, https://www.jamsadr.com/arbitration-fees [https://perma.cc/Y3SA-P37M] (last visited July 28, 2021).

47. CONSUMER ARBITRATION RULES, *supra* note 4444, at 11 (Rule R-2(c)-(e)); EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 11 (Rule 4(b)(ii), (iii)); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 7(c), (e) (providing the procedure for JAMS consumer and employment claims under $250,000).

3.   **An Arbitrator is Assigned to the Case:** After all claims and counterclaims are filed, an arbitrator is assigned to the case. Depending on the type of case and the claim amounts, the arbitrator is either directly appointed to the case with no party input or selected by the parties through a strike and rank process.[48] (The strike and rank process is described below in this section).

4.   **The Case Format is Determined:** Depending on the arbitration provider, the type of case, and the amount of the claim, the format of the case will be determined during a pre-hearing administrative meeting. The options are a live hearing (meaning a hearing that is either in-person, telephonic, or held over Zoom) or a desk arbitration (meaning that the parties submit their arguments to the arbitrator in writing and the arbitrator makes a decision on the basis of the documents only). A desk arbitration is also called a documents-only proceeding. For a live hearing, the date, time and location of the meeting is determined during this pre-hearing administrative meeting.[49]

5.   **The Hearing is Held:** For documents-only proceedings, the arbitrator reviews the submitted documents outside of the presence of the parties. For live hearings, the proceedings are informal with the consumer/employee usually presenting their arguments and evidence first, followed by the business. The presentation and submission of evidence does not have to be in a form that would otherwise be required by state or federal evidentiary rules. The arbitrator closes the hearing after both sides have finished presenting their cases.

6.   **The Arbitrator Issues a Decision:** The arbitrator issues their decision on the case. The decision is called the "award." The award can be monetary such as traditional damages or backpay in the case of employment arbitration. An arbitration award can also be in the form of injunctive relief like job reinstatement. It is also possible for both damages and injunctive relief to be granted. Typically, the arbitrator has a certain amount of

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48. CONSUMER ARBITRATION RULES, *supra* note 44, at 18 (Rule R-16(a)); EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 15 (Rule 12(c)); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 12(c)-(e).

49. CONSUMER ARBITRATION RULES, *supra* note 44, at 20 (Rule R-21); EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 13-14 (Rule 8); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 14.

> time from the close of the case to submit the award to the parties. Unlike with litigation, the arbitrator's decision is final and not subject to review or appeal.

The process above lays out how arbitration works generally, but variations exist depending on the type of arbitration (consumer or employment) and the arbitration provider (AAA or JAMS). Table A1 summarizes the key features of the four categories of arbitration: AAA consumer, JAMS consumer, AAA employment and JAMS employment. While there are many institutional dimensions along which these four categories of arbitration differ, two will be highlighted here. The first major difference concerns ***arbitrator selection*** and is thus particularly relevant for the study at hand. For all categories except AAA consumer arbitration, individual consumers and employees have an opportunity to participate in arbitrator selection through the "strike and rank" process. In the strike and rank process, the arbitration provider sends each party a list of arbitrators and allows them to strike a certain number of disfavored arbitrators and rank the remaining ones. The arbitration provider then chooses the arbitrator with the highest joint score. If this selection process does not yield in an arbitrator, then the arbitration provider has the right to appoint an arbitrator at their discretion from their roster.[50] AAA consumer arbitration is the one category of arbitration that does not follow the strike and rank model. Instead, in these cases, AAA unilaterally selects the arbitrator without any formal input from either party.

The second major institutional difference concerns the ***type of hearing*** available to the consumer or employee. Here, again, AAA consumer claimants are restricted relative to other types of claimants. For AAA claimants, only document-only proceedings are typically available.[51] On the other hand, AAA employment claimants and all JAMS claimants (both consumers and employees) have the right to a live hearing by default, whether it is an in-person, telephonic, or virtual hearing.[52]

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50. *See* CONSUMER ARBITRATION RULES, *supra* note 44, at 18 (Rule R-16(a)); EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 15 (Rule 12(c)); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 12(c)-(e).

51. CONSUMER ARBITRATION RULES, *supra* note 44, at 23 (Rule R-29) (emphasizing how consumer proceedings where no individual claim exceeds $25,000 are automatically desk arbitrations).

52. EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 19-20 (Rule 28); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 17.

C. How Prevalent are AAA and JAMS in the Market of Arbitration Providers?

This study aims to estimate the demographic profile of the population of U.S. arbitrators by studying the demographic profile of AAA and JAMS arbitrators. However, if AAA and JAMs arbitrators only make up a small share of the population of U.S. arbitrators, then the results will not be representative.

So, how prevalent are AAA and JAMS in the market for U.S. arbitration? On the consumer side, the CFPB in a 2015 study measured the prevalence of different arbitration providers by examining contracts for various consumer financial products including credit cards, payday loans, mobile wireless contracts and student loans.[53] The CFPB found that AAA and JAMS were the predominant arbitration providers specified in the consumer contracts that they studied.[54]

On the employment side, professors Colvin and Gough did a survey study of 1,256 plaintiff attorneys who represented employees in both mandatory arbitration proceedings and in litigation.[55] In their survey, the authors asked the plaintiff attorneys which arbitration provider was named in the mandatory arbitration agreements they encountered, if any. The authors found that, in total, 70% of the arbitrations were administered by AAA or JAMS—50% were AAA arbitrations and 20% were JAMS arbitrations. Another 15% of the employment agreements allowed the arbitration to occur on an ad-hoc basis, meaning no specific arbitration provider was named in the agreement. The final 15% of employment arbitrations were ones that were administered by a smaller firm such as "Judicate West, ADR Services PMA and others".[56]

Overall, AAA and JAMS are the arbitration providers that are designated in the majority of U.S. consumer and employee pre-dispute mandatory arbitration clauses.

IS ARBITRATOR DIVERSITY IMPORTANT?

The goal of this paper is to explore the racial, ethnic and gender diversity within arbitration for the individual consumers and employees who are

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53. ARBITRATION STUDY, *supra* note 2, at 26.

54*. Id.* at 58 ("Counting clauses in which the AAA was listed as at least an option yields 83.3% of credit card arbitration clauses, 91.8% of checking account arbitration clauses, 94.1% of prepaid card arbitration clauses, 88.7% of storefront payday loan arbitration clauses, 66.7% of private student loan arbitration clauses, and 85.7% of mobile wireless arbitration clauses. The comparable numbers for JAMS are: 40.9% for credit card arbitration clauses, 34.4% for checking account arbitration clauses, 52.9% for prepaid card arbitration clauses, 59.2% for storefront payday loan arbitration clauses, 66.7% for private student loan arbitration clauses, and 14.3% for mobile wireless arbitration clauses.").

55. Alexander J.S. Colvin & Mark D. Gough, *Comparing Mandatory Arbitration and Litigation: Access, Process, and Outcomes*, AM. ASS'N FOR JUST. 9 (2014).

56*. Id.* at 34-35.

compelled into arbitration by non-negotiable mandatory arbitration clauses. But what is the value of diversity in the arbitration context in the first place? If arbitrators are truly neutral as the AAA and JAMS rules require them to be,[57] does an arbitrator's race, ethnicity and gender really matter?

Perhaps the easiest place to start in answering this question is with the Shawn Carter (Jay-Z) litigation and the arguments that Mr. Carter made to justify his diversity-related claim against the AAA. The main argument that Mr. Carter and his legal team advanced was that Mr. Carter, as a Black man, had a right to have a "meaningful opportunity to have [his] claims adjudicated by a neutral decision maker who reflects [his] background and experience."[58] During the arbitrator selection phase, Mr. Carter was unable to identify any Black arbitrators among the more than 200 arbitrators on AAA's New York Large and Complex Cases roster. When Mr. Carter's legal team raised this issue with the AAA, they were given an additional list of six arbitrators that were not on the original AAA roster. Only two of those six arbitrators were Black and had the required expertise; in addition, it was unclear whether these two Black arbitrators were actually a part of the AAA core and thus eligible to handle the case.[59] According to Mr. Carter, this left him with no meaningful choice of Black arbitrators especially since it would have been very easy for the opposing side to strike the two Black arbitrators, if they chose, in the subsequent strike and rank process. Mr. Carter's diversity-related arguments raise two separate questions, which I answer below.

First, in the strike and rank process, do litigants have a right to have a list of arbitrators that includes enough diversity so that they have a reasonable chance of choosing an arbitrator that matches their demographic profile, and if so, where does that right come from? This issue was never resolved in the Carter litigation as the parties ultimately settled the case soon after Mr. Carter won a temporary restraining order halting the arbitration proceedings until AAA provided him with a larger, more diverse venire of arbitrators to choose from.[60] However, in a preliminary hearing about the temporary restraining

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57. CONSUMER ARBITRATION RULES, *supra* note 44, at 17 (Rule R-19) (stating that, "[a]ny arbitrator should be impartial and independent and shall perform his or her duties carefully and in good faith."); EMPLOYMENT: ARBITRATION RULES AND MEDIATION PROCEDURES, *supra* note 44, at 17 (Rule 16) (same); *see also JAMS Streamlined Arbitration Rules & Procedures*, *supra* note 44, at Rule 12 (stating that, "[t]he arbitration shall be conducted by one *neutral* Arbitrator . . . or panel of Arbitrators . . . ." (emphasis added).

58. Pet'r['s] Mem. of Law, *supra* note 11, at 7.

59. Pet. to Stay Arbitration at 7 ¶¶ 31-33, Carter v. Iconix Brand Grp, Inc., No. 655894/2018 (N.Y. Sup. Ct. Dec. 7, 2018).

60. To be clear, the Carter litigation took issue with the arbitration *process* itself, specifically with the arbitration selection process. Once that issue was resolved, ultimately through a settlement by the parties, the arbitration over the substantive issue of intellectual property rights could go forward. The litigation was not a substitute for the arbitration but rather a legally-clarifying step that was necessary for the arbitration to resume.

order, the presiding judge, Hon. Saliann Scarpulla, very clearly expressed her opinion that no such right existed since Mr. Carter, as a part of his contract with the opposing party, voluntarily agreed to a AAA arbitration when he either knew or had reason to know that AAA had very few Black arbitrators.[61] It is unclear, though, whether this same denial of rights would exist in the case of adhesions contracts since, in those cases, consumers and employees do not have an opportunity to negotiate the terms of the contract.[62] So, whereas the right to have a venire of diverse arbitrators doesn't seem to exist in disputes between two parties that have mutually agreed to have their arbitration proceeding overseen by AAA, it might exist for consumers and employees whose adhesion contracts have a AAA mandatory arbitration clause.

Second, setting aside the issue of whether the right to a diverse venire of arbitrators exists, why is diversity in arbitration a goal that we want to pursue? One argument, the one ultimately advanced by Mr. Carter, stems from the problem of *implicit bias*. In other words, arbitrators may unconsciously harbor racist and sexist beliefs that would improperly impact their ability to render fair and neutral decisions.[63]

Another argument is one of *institutional legitimacy*. As previously mentioned, the legitimacy of arbitration has been questioned on grounds that it is unfair to individual litigants who are up against repeat playing businesses. The fact that the institution is predominately white and male adds yet another layer of institutional skepticism,[64] both from the perspective of BIPOC and female litigants (who are simultaneously more likely to be subject to forced employment arbitration and also less likely to have their claims heard by an

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61. Tr. of Proceedings at 18-19, Carter v. Iconix Brand Grp, Inc., No. 655894/2018 (N.Y. Sup. Ct. Dec. 7, 2018). Hon. Scarpulla was overseeing the preliminary hearing to decide whether a temporary restraining order for 12 days would be granted. She was not the official judge for the case; that was Barry Ostranger but he was on vacation. Hon. Scarpulla eventually agreed to grant the temporary restraining order, but in the process, shared her views. She said, "[a]gain, I couldn't agree more that the AAA should be more diversed [sic]. There's absolutely no reason why that should continue but coming into court and staying an arbitration [on the grounds that arbitration is a place of public accommodation and so there is a right to diversity] is not the way to make that happen. If people are dissatisfied with the diversity of AAA, don't put the AAA panel in your agreement. Go somewhere else. Do something that makes a difference. But to ask the Court to find that the AAA is a public accommodation is an incredible stretch." *Id.*

62. "An adhesion contract, also known as a contract of adhesion, is a contract where the parties are of such disproportionate bargaining power that the party of weaker bargaining power could not have negotiated for variations in terms of the contract. These contract are prepared by the party with greater bargaining power . . . and given to customers on a take-it-or-leave it basis." Adhesion Contract (Contract of Adhesion), LEGAL INFORMATION INSTITUTE, https://www.law.cornell.edu/wex/adhesion_contract_ (contract_of_adhesion) [https://perma.cc/C5EM-EL2Z] (accessed 11/7/2023). Examples of such take-it-or-leave it contracts include rental agreements offered from a landlord to a prospective tenant and terms of use agreements for commercial websites.

63. *See* Pet'r['s] Mem. of Law, *supra* note 11, at 14 (citing Larry J. Pittman) ("Because of the pervasiveness of unconscious racism, arbitrators are not exempted from its negative influences, which might appear during arbitration hearings.").

64. Cole, *supra* note 10, at 972.

arbitrator that looks like them) and from the perspective of BIPOC and female arbitrators who are under-represented in the profession.

LITERATURE REVIEW

In this section, I review the available research on supply-side and demand-side studies.

A. Supply-Side Studies

Many articles have been written about the need for more diversity in arbitration, but none have offered a systematic statistical study estimating the actual demographic profile of the arbitrator population. The paucity of actual hard statistics about the race/ethnic and gender distributions of the population of arbitrators was discussed extensively in Volpe's 2019 study.[65] In her review of the literature, Volpe remarked that much of the discussion about the lack of diversity is based on "anecdotal information, what is observable at events, and oft-repeated comments that the practitioner field has been dominated by rosters of mostly white males."[66]

The latest development in supply side statistics was the release of *aggregate* demographic statistics for the AAA and JAMS based on a voluntary response survey. In January 2020, Section 12 of the California Code of Civil Procedure (CCCP) 1281.96 took effect. The law mandates that private arbitration firms collect race, ethnicity and gender information from their arbitrators through a voluntary response survey and make the results public in aggregate form.[67] Because the data are in aggregate form, it is not possible to utilize them in a statistical analysis. Detailed statistical analyses require (1) individual arbitrator records with detailed demographic data that can be linked to (2) individual arbitration case records. Without the demographic, individual-level data, it is impossible to tell which demographic groups of arbitrators are selected to arbitrate and with what frequency. Beyond being in aggregate form, the CCCP data are also deficient in the sense that they come from a voluntary response (rather than a mandatory response) survey. This means that the sub-populations that stand to gain most from participating (i.e.—diverse arbitrators) will likely be over-represented in the survey data, yielding overly an optimistic depiction of diversity in the arbitration population.

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65. *See* Volpe, *supra* note 26, at 203-07.
66. *Id.* at 202.
67. Importantly, even though CCCP 1281.96 is California law, the survey requirement applies to *any* private arbitration firm that administers consumer or employment arbitrations, including those not based in California.

To my knowledge, this is the first statistical study that has attempted to do a systematic analysis of arbitrator demographics, either in an absolute sense or relative to other populations (i.e.—either to the U.S. population or populations of other jurists (lawyers, state judges and federal judges)).[68]

B.   Demand-Side Studies

Arbitration scholars have long insisted that increasing roster diversity is not a complete solution to leveling the ADR playing field.[69] In his 2020 article, Michael Green argued that even when diverse neutrals make the roster, they face an uphill battle in terms of being selected for cases because the parties are often risk-averse and thus prefer to appoint a neutral with a known track record.[70] Green describes this selection hurdle as the "core problem" in diversifying the field of arbitration.[71]

To my knowledge, this is the first article that has systematically attempted to study arbitrator selection rates, either generally or by race/ethnicity and gender.

DATA DESCRIPTION

This section presents the various data sources collected for this study.

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68.   The closest thing to a statistical study that this author has come across is a four-page Law.com article written by journalist Ben Hancock on the general lack of diversity in ADR where he interviewed lawyers and arbitrators to gain anecdotal insights into the issue. Ben Hancock, *ADR Business Wakes Up to Glaring Deficit of Diversity*, LAW.COM (Oct. 5, 2016, 1:09 PM), https://www.law.com/2016/10/05/adr-business-wakes-up-to-glaring-deficit-of-diversity/[https://perma.cc/B2CL-FV3W]. It seems that for the piece, Hancock himself or other staff at Law.com did an analysis of JAMS arbitrators based on their web profiles, similar in spirit to what this article does. *See id.* Unfortunately, Hancock's piece did not reveal any of the study's methodology, other than to offer a single sentence about the data that was used: "Law.com's review of the JAMS roster relied on profiles listed on the organizations website and used data points, including photograph, name, membership to affinity groups, and year of college graduation." *Id.* The analysis itself yielded a two-sentence result: "But according to a Law.com analysis of the more than 350 neutrals affiliated with JAMS, one of the largest national providers of ADR services, 25 percent are women and 7 percent are minorities. More than 95 percent are over the age of 50." *Id.*

69.   *See, e.g.*, Green, *supra* note 22, at 2255 (noting that increasing roster diversity is not sufficient to level the ADR playing field because parties still have discretion in selecting an arbitrator); Volpe, *supra* note 26, at 208 (highlighting limited accessibility to roster information and associated data).

70.   *See* Green, *supra* note 22, at 2278.

71.   *Id.* at 2255.

A.   JAMS

    1.   Race, Ethnicity, Gender and Other Demographic Data

The key challenge to executing this project was measuring individual arbitrator race/ethnicity identity, and to a certain extent, gender identity. Currently, there are no publicly available data sources for arbitrator race/ethnicity or gender at the *individual* level.

To collect these individual level data, two different strategies were required, one for each arbitration provider. For the JAMS data collection, one huge advantage was that the JAMS website has a dedicated biographical profile page for each arbitrator which includes their photograph as well as their name and a detailed description of their background, education, honors, professional memberships and activities, and practice areas.[72] Between 5/30/2020 and 7/22/2020, a team of five diverse RAs collected data on the full population of JAMS arbitrators that were on the website as of July 2020 (N=413).[73] These data, collected in 2020, are the most recent (and only) analyzable data set of demographic information available for individual JAMS arbitrators. [74] Importantly, the study was not hampered by any sample selection issues because the full population of JAMS arbitrators was recorded.

The data collection was carried out in two phases and each RA was given the exact same set of instructions for how to collect the data in each phase. In Phase 1 (the PICTURES ONLY data collection phase), I extracted all 413 arbitrator profile pictures from the JAMS website and put them into a custom-built MS Access database for the RAs to use in doing data entry. I asked each RA to identify each arbitrator's apparent gender (male, female) and apparent race/ethnicity (American Indian, Alaskan Native, Black or African American, East Asian, Hispanic / Latino, Pacific Islander, South Asian, White, Other Race, More than One Race) on the basis of the picture alone. Note that both the gender and race/ethnicity categories were intentionally chosen to match the ones that are used in the CCCP 1281.96 survey so that the study data could be

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72*. JAMS Neutrals: Mediators, Arbitrators, and Dispute Resolution Professionals*, JAMS, (last visited Feb. 20, 2021). https://www.jamsadr.com/neutrals/ [https://perma.cc/B7A5-5HNL].

73. The RAs were diverse in terms of race, ethnicity, and gender. They worked independently and collected data into their own separate spreadsheets that were later compared by me. This separate data collection was intentional as I wanted to get independent, multiple measures of the same information.

74. This is similarly true for my demographic data set of AAA arbitrators (see Section V.B.I.). Future work will continue to update the JAMS data set using the publicly-available arbitrator web profiles. However, my AAA demographic data set is limited in its capacity to be updated because data on Black AAA arbitrators was sourced from the 2018 Shawn Carter litigation. Until demographic, individual-level data on AAA arbitrators become publicly-available, my data set will be the best available source of information for statistical analysis.

eventually synced up with the survey data to assess the extent to which the survey data truly reflected the population of JAMS arbitrators.

Next, in the second phase (the PICTURES PLUS PROFILE phase), I gave the RAs access to the arbitrator's full JAMS web profile and asked them to collect data on the same two variables that they collected in the PICTURES ONLY phase (race/ethnicity, and gender) as well as additional demographic information. The additional variables that were collected in phase two were variables that I requested for the specific purpose of doing validity checks of the arbitrator's race/ethnicity and gender variables in the data. Specifically, in order to check the gender variable, I asked the RAs to collect data on the pronouns that were used in the arbitrator's profile (she/her/hers, he/him/his, or they/theirs). In order to validate the race/ethnicity variable, I asked the RAs to collect (1) information on each arbitrator's membership in professional affinity groups (e.x.—Hispanic National Bar Association, Chinese-American Citizens Alliance, Black Women's Bar Association, etc.), (2) information on any languages that the arbitrator spoke besides English, and (3) information on whether or not the arbitrator made their profile available in Spanish. Finally, I asked the RAs to collect additional information including the arbitrator's age (as estimated from their college graduation year), type of judicial experience (if any), years of judicial experience (if any), tenure with JAMS, and primary office location.

i.   Race/Ethnicity and Gender Identity Validation Process

In order to maximize accuracy within the race/ethnicity and gender measurements, I took the following steps.

For race/ethnicity identification: I took the union of all arbitrators that the RAs identified as Black, for example, in either Phase One or Phase Two. Then, I used the three validation variables mentioned above (professional affinity group affiliation, languages spoken, or profile availability in Spanish) to verify the arbitrator's race/ethnicity. In cases where there the validation source (or sources) did not confirm the arbitrator's race/ethnicity, I used independent, publicly available sources to verify the arbitrator's race/ethnicity, such as news articles or social media (ex., Linkedin). Within these publicly available sources, I looked for either evidence of an affiliation to a racial/ethnic affinity group or a self-identification of race/ethnicity in a news article or biography. Every arbitrator identified as diverse in my data set has at least one validation source for their race/ethnicity identification, and, in some cases two.

For gender identification: I took the union of all arbitrators that the RAs identified as female, for example, in either Phase One or Phase Two. Then, I used the gender pronouns validation variable mentioned above (i.e.—pronouns used in arbitrator web biography) to verify the arbitrator's gender

identification. No instances of inconsistency between the RA identification and the gender pronouns were found.

ii. Data Considerations

The main advantage of my methodology of collecting data from the JAMS website is that it means that I have the full population of all JAMS arbitrators that were offering their services to potential clients as of July 2020. There are, however, two things to note about this methodology. First, my data represent measurements of *apparent* race/ethnicity and gender, not *self-identified* race/ethnicity and gender. The use of apparent race/ethnicity and gender is perhaps advantageous in a study like this since clients and lawyers likely rely, at least partially, on apparent demographics from the web-based profiles during arbitrator selection. Second, on the race/ethnicity dimension, it is possible that my methodology of finding non-white arbitrators through pictures and race/ethnicity-related information in the web profiles could lead to an under-counting of arbitrators of color. Theoretically, if there is an arbitrator that is white-appearing to my RAs and that self-identifies as Black **and** does not include any Black affinity group affiliations in their web profile, then it is unlikely that any of my five RAs will detect this. I tried to minimize these under-detection errors by enlisting five different Ras from different racial/ethnic backgrounds and different genders to conduct the data collection. Still, they may occur. This means that, strictly speaking, my data provide a lower-bound on the number of arbitrators of color in the JAMS population. Relatedly, because all arbitrators that are not classified as non-white are defaulted into the white category, my data provide an upper-bound on the number of white arbitrators in the JAMS population. On the flip side, the fact that I am able to verify every arbitrator's race/ethnicity means that my data are unlikely to have mis-identification errors—i.e. errors that could arise from identifying a self-identifying white arbitrator as non-white.

2. *Arbitration Outcomes Data*

California Code of Civil Procedure, Section 1281.96(a)(1)-(11), requires that all arbitration firms publish, on a quarterly basis, detailed information about all arbitration cases they have overseen within the previous five years.[75]

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75. Even though the reporting requirement is founded in California law, it applies to all "consumer" arbitration matters, regardless of whether or not they are California disputes. CAL. CIV. PROC. § 1281.96(a)(1)–(11) (West 2020).

Though the legislation refers to "consumer"[76] arbitration cases, employment matters and tort matters are included under this umbrella term along with arbitrations concerning more traditional consumer products. The information required to be reported includes the identity of the non-"consumer" party (if the non-"consumer" was a business or corporation), whether the initiating party was the "consumer" or non-"consumer", details about the type of dispute (consumer, employment, or tort), details about which party prevailed ("consumer" or non-"consumer"), the identity of the "consumer's" lawyer or law firm (if any), the dates that the arbitration matter was opened and disposed, the type of disposition (settlement, dismissal, award, withdrawn, etc.), the amount of the claim, and importantly for this study, the name of the arbitrator. The JAMS case records used for this study are from the fourth quarter report from 2020 and have a filing date between 1/1/2015 and 12/31/2019.[77]

The cases data are merged with the data on the 413 JAMS arbitrators (described in the previous section) by arbitrator name. Therefore, each merged record contains information on the details of the case itself as well as demographic data on the JAMS arbitrator that was assigned to that case.

B.   *American Arbitration Association (AAA)*

1.   *Race, Ethnicity, Gender and Other Demographic Data*

Unlike JAMS, the AAA does not provide public web profiles for their full roster of arbitrators. In fact, the AAA roster itself is not publicly available on the internet.[78] This means that the approach to studying supply and demand issues for the AAA required a different, more creative approach. For the supply issues, I relied on court documents from the Jay-Z case. Though these documents did not give names of the full roster of all 5,513 AAA arbitrators,[79] they did give the full roster of all 152 Black-identifying AAA arbitrators.[80] Using this list, in combination with other court documents and the AAA case records (see Section V.B.2 infra), I was able to estimate the percent

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76. I use quotation marks around the term "consumer" when referring generally to the non-business party (which could be an employee, tort grievant, or actual consumer.)

77. For access to the most updated JAMS case data, see *Consumer Case Information*, JAMS, (last visited Feb. 8, 2021) https://www.jamsadr.com/consumercases/ [https://perma.cc/TQ5N-VC5P].

78. *Why the AAA's Roster of Arbitrators is Not Publicly Available*, AM. ARB. ASS'N, (last visited July 28, 2021) https://adr.org/sites/default/files/document_repository/Why-the-AAAs-Roster-of-Arbitrators-is-Not-Publicly-Available.pdf. [https://perma.cc/NXV3-H7UC].

79. *See Arbitrator Demographic Data*, AM. ARB. ASS'N, https://www.adr.org/sites/default/files/document_repository/ArbitratorDemographicData_01132020.pdf [https://perma.cc/S9BT-77JU] (last visited July 28, 2021) (showing that there were 2,805 arbitrators that responded to the CCCP survey and 2,708 arbitrators that did not respond to the survey, for a total of 5,513 arbitrators).

80. Exhibit 3 at 22-23, Carter v. Iconix Brand Grp, Inc., No. 655894/2018 (N.Y. Sup. Ct. Dec. 7, 2018), ECF No. 6.

of the AAA roster that is Black, as well as the percent of selected AAA arbitrators that are Black. Thus, the existing AAA data support a study of supply issues *for AAA Black-identifying arbitrators only.*

For the demand part of the study, I adopt a four-part strategy to identify AAA arbitrators that were selected for arbitration. First, I identify Black arbitrators using the aforementioned roster of 152 Black AAA arbitrators. Next, I use the Python-based ethnicolr machine learning algorithm to identify Asian and Hispanic arbitrators based on arbitrator last name.[81] Third, I use the R-based genderdata machine learning algorithm to identify female arbitrators based on arbitrator first name and estimated year of birth.[82] Finally, I use natural language processing to identify retired judges. Thus, for the demand study, I am able to calculate the selection rates for Asian, Black, Hispanic, female, and retired judge arbitrators.

      iii.   Jay-Z Court Documents Data—Used to Identify Black Arbitrators for the Supply and Demand Analysis

As previously discussed, celebrity Shawn Carter filed a petition in New York state court to enjoin an arbitration dispute that was set to be heard by AAA to settle a dispute between Mr. Carter and another party. Mr. Carter's petition, filed on November 28, 2018, asked for the arbitration proceedings to be paused until AAA could provide a diverse set of arbitrators for him to choose from.[83] On December 6th, AAA filed a letter with the court that responded to various requests for demographic information about the AAA arbitrator rosters.[84] This AAA letter is an important source document for this study because it not only provides aggregate statistics about the number of self-identified Black arbitrators serving on AAA's three rosters (national roster (152), Large Complex Case national roster (18), Large Complex Case New York roster (1)), but also listed the names of all 152 Black-identifying arbitrators on AAA's national roster. I match this list to the AAA case records to identify AAA cases presided over by Black-identifying arbitrators. One important caveat is important to mention: the AAA letter makes clear that their list of 152 Black-identifying arbitrators only includes those AAA arbitrators that self-identified as Black on a voluntary survey that AAA administered (not

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81. Gaurav Sood & Suriyan Laohaprapanon, *Predicting Race and Ethnicity from the Sequence of Characters in a Name* 9 (Apr. 24, 2018), https://eucenter.tamu.edu/Events-(1)/Sood-PredictingRace Ethnicity-(1).aspx (noting the ethnicolr machine learning algorithm is publicly available and can be downloaded at https://github.com/appeler/ethnicolr).

82. Cameron Blevins & Lincoln Mullen, *Jane, John . . . Leslie? A Historical Method for Algorithmic Gender Prediction*, 9.3 DIGIT. HUM. Q. (2015) (noting that the genderdata machine learning algorithm is publicly available and can be downloaded at https://github.com/lmullen/genderdata).

83*. Id.* at 12.

84. Exhibit 3, *supra* note 80, at 22-23.

the CCCP 1281.96 survey).[85] However, it is possible that there are AAA arbitrators that identify as Black but did not respond to the survey. As a result, my merged cases will necessarily be a lower-bound on the number of cases decided by Black-identifying AAA arbitrators.

<blockquote>iv. Machine Learning Algorithms—Used to Identify Asian, Hispanic, and Female Arbitrators for the Demand Analysis</blockquote>

In addition to Black arbitrators, the current study needs to identify Asian, Hispanic, and female arbitrators within the group of AAA arbitrators that are selected for arbitration. However, as previously mentioned, AAA does not maintain web profiles for its affiliated arbitrators. Even if such web profiles did exist, the sheer size of the AAA arbitrator pool (5,513) would make it extremely costly to use a team of RAs to do that many demographic identifications. Therefore, machine learning algorithms are used to estimate Asian and Hispanic identity, as well as gender identity, within the AAA population selected for arbitration. To my knowledge, this represents the first scholarly use of machine learning techniques in the arbitration research context to make demographic identifications.

A machine learning algorithm (also referred to as a machine learning classifier) is a set of rules that is used to classify data points into different categories.[86] One common machine learning algorithm that many people are familiar with is an email spam filter.[87] An email spam filter is simply a list of rules that categorize incoming emails into the "spam" category or the "non-spam" category based on the presence or absence of certain character strings in the email text itself. But how does the email spam filter know which character strings to label as spam and which to label as non-spam? The answer is that the spam filter is first "trained" on a data set of character strings that are already properly labeled as spam or not. From this, the algorithm "learns" which phrases are commonly found in spam message and which are likely to occur in legitimate messages. As new messages enter the inbox, the trained algorithm uses the associations learned from the training data set to predict whether the new message is spam or not.

In the present case, the goal is to classify AAA arbitrators into different race, ethnicity, and gender groups. At the risk of stating the obvious, it is worth noting that classifying emails into groups *is not* the same exercise as classifying people into groups. Indeed, using machine learning for demographic

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85. *Id.* at 4-5.

86. *Machine Learning Classifiers -- The Algorithms & How They Work*, MONKEYLEARN, (last visited July 28, 2021) https://monkeylearn.com/blog/what-is-a-classifier/ [https://perma.cc/8R2K-6FTZ].

87. *See id.*

identification is rife with moral and ethical concerns.[88] In addition, technical issues abound since training data sets are often underpopulated with BIPOC, leaving the algorithms poorly trained and thus prone to under-performance and poor predictions.[89] Still, when used appropriately and with highly diverse training data sets, machine learning can be a powerful tool in discrimination studies.

One race/ethnicity classifier that has been used in academic research is the Python-based machine learning algorithm "ethnicolr".[90] Ethnicolr is a set of rules that categorizes surnames into different race and ethnicity groups based on the sequence of characters that exist in the surname.[91] Just as in the spam text identification case, the ethnicolr algorithm learns which sequences of characters in a last name are commonly associated with different racial and ethnic groups by first being applied to training data sets that have lists of names, as well as the race and ethnicity of those names. Of course, the success of the algorithm in predicting arbitrator race and ethnicity depends crucially on the training data set. Training data sets that do not have a sufficient number of Asian or Hispanic names will not be useful in helping the algorithm to successfully identify Asian and Hispanic arbitrator names. The ethnicolr classifier can be used with three different training data sets: Florida Voting Registration data, Wikipedia data, or Census data.[92] Previous academic papers

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88. Catherine Kenny, *Artificial Intelligence: Can We Trust Machines to Make Fair Decisions?*, U.C. DAVIS (April 13, 2021), https://www.ucdavis.edu/curiosity/news/ais-race-and-gender-problem [https://perma.cc/RYS8-H6VH]; *see also* Adrienne Yapo & Joseph W. Weiss, *Ethical Implications of Bias in Machine Learning*, presented at the 51st Hawaii International Conference on System Sciences 5365, 5365 (2018); Brent D. Mittelstadt, Patrick Allo, Mariarosaria Taddeo, Sandra Wachter & Luciano Floridi, *The Ethics of Algorithms: Mapping the Debate*, BIG DATA & SOC'Y (2016).

89*. See* Garcia, *supra* note 82, at 114 ; Cade Metz, *Who is Making Sure that A.I. Machines Aren't Racist?*, N.Y. TIMES (Mar. 15, 2021) https://www.nytimes.com/2021/03/15/technology/artificial-intelligence-google-bias.html; James Zou & Londa Schiebinger, *AI Can be Sexist and Racist—It's Time to Make it Fair*, NATURE (July 18, 2018), https://www.nature.com/articles/d41586-018-05707-8 [https://perma.cc/ET2N-7328].

90. For more information on the ethnicolr algorithm, please see https://ethnicolr.readthedocs.io/ethnicolr.html.

91. More technically, when the Florida Voter Registration training data set is used, ethnicolr computes the probability that a given last name belongs to each of four racial/ethnic groups: Asian, Hispanic, Non-Hispanic Black and Non-Hispanic white. Then, it assigns that last name to whichever one of those racial groups has the highest computed probability. Similarly, when the Wikipedia training data set is used, ethnicolr computes the probability that a given last name belongs to each of thirteen racial/ethnic groups: Greater East Asian, East Asian; Greater East Asian, Japanese; Greater East Asian, Indian Sub-Continent; Greater African, Africans; Greater African, Muslims; Greater European, British; Greater European, East European; Greater European, Jewish; Greater European, Western European, French; Greater European, Western European, Germanic; Greater European, Western European, Hispanic; Greater European, Western European, Italian; Greater European, Western European, Nordic.

92. Ultimately, based on best fit for the data, I use the Florida Voting Registration training data for Hispanic identification and the Wikipedia training data for Asian identification. *See* Section V.B.1.ii.a. *infra*.

have successfully used the ethnicolr algorithm to study discrimination.[93] In the current paper, it will be used to identify arbitrators of Asian and Hispanic background based on their surnames.

The R-based machine learning algorithm "genderdata" has been used to make binary gender classification in academic research.[94] It is more advanced than the previous generation of ML gender identifiers because it relies on both first name and year of birth to account for the fact that certain names like "Terry" or "Leslie" have changed from being predominately associated with one gender or another over time. Unfortunately, there are currently no gender-based ML algorithms that predict for non-binary identification, so the study is limited to binary classifications.

Doing the identifications proceeded with five steps: First, because each arbitrator had the potential to show up multiple times in the AAA case data set, I extracted a list of unique arbitrator names from the case data set. In this process, the 5,513 cases in the AAA case data set were condensed into a list of 2,904 unique arbitrator names. Second, the 2,904 names were cleaned for consistency and misspellings. Third, the names were divided into likely first, middle, and last names. Because ethnicolr relies exclusively on last name to do the prediction and genderdata relies on exclusively on the first name (and year) to do the prediction, the separation of first from last name was critical. Fourth, the ethnicolr algorithm was validity-tested using the RA-classified JAMS arbitrator data (413 arbitrators) to determine which training data sets were most accurate for which racial and ethnic groups. Recall that the race, ethnicity and binary gender of the 413 JAMS arbitrators had already been predicted by the RAs and validated. In order to see which one of the ethnicolr training data sets was best suited for the arbitrator data, I predicted the race and ethnicity of the 413 JAMS arbitrators based on their last name, alternating between each of the three training data sets (Florida Voter Registration, Wikipedia, and Census). I then chose the final training data set based on which one was most successful in predicting the *same* race and ethnicity of the JAMS arbitrators as the RAs did. The genderdata algorithm was also validity-tested using the RA-classified

93. *See* Gerald Marschke, Allison Nunez, Bruce A. Weinbern & Huifeng Yu, *Last Place: The Interaction Between Ethnicity, Gender, and Race in Biomedical Authorship*, 108 AEA PAPER & PROC. 222, 223 (May 2018) (using ethnicolr to identify race and ethnicity of authors' last names in a study investigating the role of race and ethnicity on scientific co-authorship in the sciences); *see also* Adam Millard-Ball, Garima D. & Jessica Fahrney, *Diversifying Planning Education Through Course Readings*, J. PLAN. EDUC. & RSCH. (2021); Trang T. Le, Daniel S. Himmelstein, Ariel A. Anderson, Matthew R. Gazzara & Casey S. Greene, *Analysis of ISCB Honorees and Keynotes Reveals Disparities*, BIORXIV (2020).

94. *See* Heidi Blackburn & Jason Heppler, *Who is Writing About Women in STEM in Higher Education in the United States? A Citation Analysis of Gendered Authorship*, 10 FRONTIERS IN PSYCHOL. 1, 3 (2020); Lingshu Hu & Michael W. Kearney, *Gendered Tweets: Computational Text Analysis of Gender Differences in Political Discussion on Twitter*, 00 J. LANGUAGE & SOC. PSYCHOL. 1, 16 (2020).

JAMS arbitrator data to verify that it also performed well in identifying binary gender. Fifth, and finally, the ethnicolr and genderdata algorithms were applied to the AAA 2,904 arbitrator names for race, ethnicity, and gender classification.

<div align="center">

a. Machine Learning Algorithms: Race/Ethnicity and Gender Identity Validation Process

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Table A2 presents the validity test results. As explained above, the strategy is to test the validity of the ethnicolr and genderdata algorithms by evaluating how well they do in replicating the results of the RA-based identification of the JAMS arbitrators. Beginning with Asian identification, there were eight arbitrators identified as Asian on the JAMS roster of 413.[95] The ethnicolr algorithm correctly predicted Asian background for 50% of the Asian arbitrators when the Florida Driving Licenses training set was used, and 75% of the Asian arbitrators when the Wikipedia training set was used, perhaps owing to the greater amount of identified Asian diversity in the Wikipedia training dataset.[96] For Hispanic ethnicity, there were eleven Hispanic JAMS arbitrators on the roster of 413. The ethnicolr algorithm correctly predicted 91% of Hispanic JAMS arbitrators when the Florida Driving Licenses training set was used and 73% of the Hispanic JAMS arbitrators when the Wikipedia training set was used. Based on the greater accuracy of the Wikipedia training set with Asian surnames and the greater accuracy of the Florida Driving Licenses training set with Hispanic surnames, both training sets will be utilized in the AAA arbitrator classification; ethnicolr-Wikipedia will be used to predict for Asian background and ethnicolr-Florida Driving Licenses will be used for to predict Hispanic background.

The validity test results from using the genderdata algorithm on the RA-identified JAMS data are even more promising. Of the 413 JAMS arbitrators, 116 were identified as women by the team of five RAs. Genderdata correctly identified 95.7% of them.

With the most accurate ML algorithms chosen, I applied these chosen algorithms to the list of 2,904 AAA arbitrators that appear at least once in the

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95. In my RA-based data collection for JAMS, I was limited by the very coarse ethnic categories used in the CCCP survey. The CCCP's has separate categories for Asian and Pacific Islander but no separate category for South Asian. (For my own purposes, I did have my RAs collect data for South Asians separately but these data are not shown separately in the tables.) Therefore, the eight Asian-identified JAMS arbitrators include South Asians, (East) Asians, and Pacific Islanders.

96. When the ethnicolr algorithm is used with the Florida Voter Registration training data set, it only identifies Asian and not-Asian; it doesn't identify any sub-categories of Asian. The Wikipedia training data set is much richer than the Florida data set in terms of identified Asian diversity. As such, it is able to classify Asians into three sub-categories: East Asian, Japanese, and Indian.

2020 quarter three disclosures. Table A3 gives the race, ethnic, gender breakdown of the 2,904 AAA arbitrators based on the ML analysis. Of the 2,904 selected AAA arbitrators, 72 (or 2.48%) were predicted Hispanic and 32 (1.10%) were predicted Asian. There were 651 arbitrators (or 22.42% of the 2,904) that were predicted to be female. As previously mentioned, these predictions will be used in the demand study to test for under- or over-selection of different groups of diverse arbitrators.

b. Machine Learning Algorithms: Data Limitations

While the use of ethnicolr and genderdata algorithms is strictly necessary to perform the type of demographic analysis that is of interest here, it is important to point out some of the limitations of using the algorithms in this context. First, for ethnicolr, the algorithm relies on last name to make its ethnic classifications. However, there may be several reasons that a person's last name may not be reflective of their ethnicity, such as elective name changes that happen during relational transitions like marriage, domestic partnering or adoption. This may mean, for example, that even when the algorithm identifies the ethnic origin of the last name with 100% accuracy, it could still be incorrectly identifying the ethnicity of the person. A similar limitation arises for the genderdata algorithm which relies of first name for gender identification. First of all, as mentioned above, the genderdata algorithm is limited in the sense that it does not have the ability to identity people who are gender non-binary. Moreover, for gender-neutral names like "Terry" or "Leslie," the algorithm is limited in its ability to correctly identify binary gender. To the extent that some of the gender-neutral names were more popularly used for boy babies than girl babies in certain years (or vice versa), the algorithm does account for that in its prediction. However, if a first name is equally likely to be used for boys and girls in a particular year, the algorithm's prediction will likely not be accurate.[97]

v. Natural Language Processing—Used to Identify Former Judges

The last step in the AAA arbitrator identification is to determine which of the AAA arbitrators have judicial experience. In the AAA digital disclosures, then-current and former judges have the prefix of "Ret." or "Hon." added to their name. I relied on the appearance of this prefix next to an arbitrator's name as an indicator for whether or not the arbitrator had judicial experience.[98] In

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97. Blevins & Mullen, *supra* note 83, at 1.
98. A similar procedure was used in *Individual Employment Rights*. *See Individual Employment Rights*, *supra* note 74, at 1030.

total, 365 of the 2,904 selected AAA arbitrators (or 12.57%) had judicial experience.

2.   Arbitration Outcomes Data

AAA faces the same mandatory disclosure requirement as JAMS. Specifically, under CCCP 1281.96 they must also publish details on all their cases for the past five years on a quarterly basis. The AAA data include all the same variables as are included in the JAMS data described above.[99] The AAA case records used for this study are from the third quarter of 2020 and have a filing date between 1/1/2015 and 12/31/2019.[100]

EMPIRICAL ANALYSIS

A.   Supply-Side Analysis: Demographic Profile of the Arbitrator Population

Are people of color and women underrepresented in arbitration? In this section, I present descriptive statistics for the arbitrator population at JAMS and AAA, the two largest arbitration firms in the United States. I also compare my results to the contemporaneous CCCP 1281.96 survey results to gain an understanding of how well those legislatively-mandated surveys produce data that is representative of the underlying arbitrator population. Then, I present *comparative arbitrator descriptive statistics*—i.e., statistics comparing the demographic profile of arbitrators to the demographic profile of four benchmarks (the general U.S. population, ABA lawyers, state judges and federal judges)—to gain a sense of the degree of diversity underrepresentation.

1.   Descriptive Statistics: JAMS Arbitrators

Table 1 presents descriptive statistics on the race/ethnicity and gender diversity of JAMS arbitrators. Column 1 presents the race/ethnicity and gender demographics of the full population of all JAMS arbitrators that offered their arbitration services as of July 2020. JAMS arbitrators are predominately male; only 28 percent of JAMS's 413 arbitrators are female as compared to 72 percent of males. JAMS arbitrators are also predominately white. Only 36 of

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99. For access to AAA case data, see *Practice Areas*, AM. ARB. ASS'N, https://adr.org/consumer [https://perma.cc/NL3J-FR4F] (last visited Feb. 1, 2021).

100.   The third quarter 2020 data are used for this paper. The data from the current quarter and the five previous years are available on an on-going basis on the AAA website at https://www.adr.org/consumer in a downloadable MS Excel format. The data are available under the hyperlink "Consumer and Employment Arbitration Statistics."

the 413 arbitrators are people of color; 16 are Black (3.87 percent), 11 are Hispanic (2.66 percent), eight are Asian (1.94 percent), and one is from another race/ethnic background (0.24 percent).

An important question is how representative the CCCP 1281.96 survey sample is of the JAMS arbitrator population.[101] The California legislature passed this legislation to get a sense of the degree of diversity in each arbitration company. However, because arbitrators can decline to participate in the survey, the survey results may not necessarily be representative of the population that they seek to capture. Quite the contrary, because it is a voluntary response sample, it is possible that this sample is unrepresentative of the true arbitrator population because parties that are deeply interested in the outcome of the survey will tend to participate more, leading to potentially misleading results.[102] In the present case, it is possible that diverse arbitrators, having an incentive to bring attention to the underrepresentation issue, will participate at higher rates than whites and males and will thus be overrepresented in the survey results. This would, ironically, be counter-productive to the efforts of those arbitrators of color who seek to bring attention to the underrepresentation issue.

In Table 1, the comparison of columns 1 and 2 gives us a unique look into the degree to which these CCCP surveys will be informative. As column 2 shows, 277 of the 413 JAMS arbitrators agreed to participate in the survey (response rate of 67.1%). The sample selection did not seem to distort the gender distribution. The gender distribution in the CCCP sample (29% female, 71% male) was very similar to the gender distribution of the JAMS arbitrator population (28% female, 72% male). On the race/ethnicity dimension, it appears that arbitrators of color responded to the survey more often than white arbitrators. Nearly all the 36 arbitrators of color responded to the survey (35 out

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101. JAMS CCCP 1281.96 demographic survey data (2020). On file with YJLF. (As this was article was going to press in December 2023, JAMS released the 2023 aggregate CCCP demographic survey data. Interested parties may find the 2023 JAMS CCCP survey results at https://www.jamsadr.com/files/uploads/documents/jams-panelist-demographic-survey-2023.pdf [https://perma.cc/Q553-68Z8]. As of December 16th, 2023, the AAA has not released their 2023 aggregate CCCP demographic survey results.

102. *See* MARIO F. TRIOLA, ESSENTIALS OF STATISTICS 19 (4th ed. 2011) (noting that, with voluntary response samples, "we can only make valid conclusions about the specific group of people who chose to participate, but a common practice is to incorrectly state or imply conclusions about a larger population. From a statistical viewpoint, such a sample is fundamentally flawed and should not be used for making general statements about a larger population." A "voluntary response sample" (sometimes also referred to as a "self-selected sample") is defined as a sample in which the "respondents themselves decide whether to be included." *Id.* at 18. *See also* Cheung et al, *The Impact of Non-response Bias Due to Sampling in Public Health Studies: A Comparison of Voluntary Versus Mandatory Recruitment in a Dutch National Survey on Adolescent Health*, 17 BMC PUBLIC HEALTH 1 (2017) (stating that "[r]esearch that is dependent on voluntary subject participation is particularly vulnerable to sampling bias").

of 36 or a 97.2% response rate). On the other hand, only 237 of the 377 white arbitrators responded (237 out of 377 or a 62.9% response rate).

Overall, this analysis demonstrates that the CCCP data have the potential to give us an overly optimistic view of the racial and ethnic inclusiveness of the arbitrator population. Higher response rates, approaching 100%, are necessary to get a truer sense of the demographic profile of the population. According to the CCCP survey data, 12.87% of JAMS arbitrators are BIPOC when, in reality, this figure is 8.72%. On the other hand, the gender distribution does not seem to be greatly distorted in the CCCP sample. The percent of women on the JAMS roster and the percent of women in the CCCP sample are both about 28%.

2. Descriptive Statistics: AAA Arbitrators

Table 2A presents data on the demographic profile of AAA arbitrators. To begin, we notice that the AAA national arbitrator roster is quite large; 5,513 arbitrators are on the AAA roster. This is more than 13 times the size of the JAMS arbitrator population. Next, because the Jay-Z court documents only provide information on Black arbitrators, we focus our attention on the Black population of AAA arbitrators. 107 of the 2,805 CCCP 1281.96 survey respondents self-identified as Black (3.9%).[103] In comparison, as reported in court documents, 152 of AAA's national roster identified as Black as of May 2018, suggesting that Black arbitrators are only 2.76% of the national roster.[104] This suggests that, like the JAMS CCCP, the AAA CCCP voluntary response survey may be over-sampling Black arbitrators.

Another question is how well-represented Black arbitrators are on the AAA Large Complex Case roster relative to the national roster. The Large Complex Case roster is a prestigious roster, listing all those AAA neutrals that have specific experience in dealing with large cases that typically yield high arbitrator fees.[105] I find that Black arbitrators are underrepresented on the Large Complex Case roster, both nationally and in New York, by an even greater extent than they are on the national AAA roster. Specifically, AAA's letter stated:

> "In attempting to create *a list of all AAA Large Complex Case Roster members for all regions of the country, it appears there*

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103.   The AAA CCCP 1281.96 demographic survey data are available at https://www.adr.org/sites/default/files/document_repository/ArbitratorDemographicData_01132020.pdf [https://perma.cc/3CR8-57DK]. These data are as of 2020 and, as of December 16th 2023, have not been updated.

104.   The 2.76% figure is computed using the 152 figure from May 2018 and the 5,513 roster size figure from the 2020 CCCP 1281.96 survey. If the actual AAA roster size was substantially smaller than 5,513 in May 2018, then the Black percentage of the AAA roster will be underestimated.

105.   The AAA Large and Complex Case roster is a list of highly qualified arbitrators that have expertise in complex legal matters.

would be over 1000 arbitrators on that list. Given that large number, and the fact that arbitrators from AAA Rosters other than the Large Complex Case Roster were used to create the list of potential arbitrators, the AAA will not provide this list. However, to the extent necessary, upon the resumption of the administration of the arbitration and outcome of the pending litigation, the AAA would work with the parties to identify arbitrators from that Roster or others who can be considered for appointment. *Eighteen individuals on the AAA's national Large Complex Case Roster have self-identified as African American*, and *one arbitrator on the New York Large Complex Case Roster has self-identified as African American.*"[106]

These numbers, presented in Table 2B, imply that the Black percentage of the national, Large Complex Case roster is less than 1.8%. Moreover, the above numbers, in addition to the total number of arbitrators that are on the New York Large Complex Case roster (101) (see Exhibit D), imply that the Black percentage of the New York Large Complex Case roster is a mere 1%.[107]

To conclude, our knowledge about the population of AAA arbitrators is limited by the fact that, unlike JAMS, AAA does not publicly share individual profiles of their arbitrators on their website. Fortunately, the Jay-Z court documents allow us to at least glean important information about the population of Black AAA arbitrators. Specifically, we learn that AAA Black arbitrators comprise about 2.76% of the total AAA population, a slightly smaller share than exists within the JAMS population (3.87%). Moreover, the AAA CCCP survey data present a slightly overly optimistic view of the racial diversity of the AAA population. Whereas 3.9% of the AAA survey respondents were Black, only 2.76% of AAA's arbitrators are Black. My analysis also suggests that the CCCP data should not be used to estimate the racial diversity of the Large and Complex roster (national or NY), which is much less racially diverse than even the general AAA roster.

3. Relative Descriptive Statistics: Arbitrators versus the U.S. population, Lawyers and Judges

Tables 1, 2A and 2B confirm that the U.S. arbitrator population is overwhelmingly white and male in absolute terms. The next question is whether white males are overrepresented in a relative sense—that is, compared to their share in the general U.S. population and their share in the population of other U.S. jurists. As my AAA data only have information on Black arbitrators,

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106. Exhibit A at 3, Carter v. Iconix Brand Grp, Inc., No. 655894/2018 (N.Y. Sup. Ct. Dec. 9, 2018) (emphasis added).
107. Jay-Z's arbitration case was one that would have been subject to the Large and Complex Case roster, with very low percentages of Black arbitrators.

I rely mostly on the JAMS data for the comparative analysis. Thus, this analysis compares my JAMS sample (2020) and, to a certain extent, my AAA sample (2018), with the most comparable baseline data available: data on ABA lawyers (2019), federal judges (2017), state judges (2014), and the general U.S. population (2019).

We begin by comparing the JAMS data to the U.S. population from the U.S. Census Bureau (Table 3).[108,109] Using this benchmark, it is clear that the arbitrator population is disproportionately white and male. Whereas women comprise 50.8% of the U.S. population, they make up 28.09% of the JAMS population—a 22.7 percentage point or 44.70% difference.[110] People of color are even more underrepresented: 39.9% of the U.S. is non-white as compared to 8.72% of JAMS arbitrators—a 31.18 percentage point or 78.15% difference. Black people are greatly underrepresented on both the JAMS and AAA rosters. 13.4% of the U.S. population is Black as compared to 3.87% of the JAMS population—a 9.53 percentage point or 71.12% difference. The underrepresentation is even greater in AAA; only 2.76% of the AAA roster is Black—a 10.64 percentage point or 79.40% difference. Asian jurists are also underrepresented. 5.9% of the U.S. population is Asian as compared to 1.94% of the JAMS population—a 3.96 percentage point or 67.12% difference.

Comparing the JAMS population to the population of other U.S. jurists (Table 3), I find that there is greater parity, though significant gaps remain, particularly along the race/ethnicity dimension. First, along the gender dimension, JAMS arbitrators are about on par with judges; specifically, JAMS arbitrators are slightly more gender balanced than federal judges, but slightly less gender balanced than state judges. There is, however, a larger difference between JAMS arbitrators and ABA lawyers. ABA lawyers are about 36.5%

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108. *See 2019 Population Estimates by Age, Sex, Race and Hispanic Origin*, U.S. CENSUS BUREAU (June 25, 2020), https://www.census.gov/newsroom/press-kits/2020/population-estimates-detailed.html. US [https://perma.cc/9FMS-3Y9B].

109. Unfortunately, the Hispanic figures from the U.S. Census are not directly comparable to the JAMS Hispanic figures and so will not be presented in this section, though Table 3 does provide the both Hispanic figures for reference along with detailed footnotes. The non-comparability stems from the fact that the CCCP appears to define Hispanic as a separate, mutually exclusive category from white. Because I am mostly concerned with comparing my JAMS data with the CCCP data, I followed this definition when doing my data collection. The Census, on the other hand, defines the Hispanic category more broadly so that technically someone could be both white and Hispanic. Therefore, the Census Hispanic population share will almost surely be larger than the JAMS Hispanic population share. Given this, a comparison of the two would exaggerate the extent of any Hispanic underrepresentation.

110. Percentage point differences and percent differences are calculated in the following way in this section: Percentage point difference is simply the difference between the two demographic percentages. For example, the percentage point difference between the woman population share (50.8%) and the woman JAMS share (28.09%) is 22.7 percentage points. On the other hand, the percent difference tells us how much the JAMS percentage differs from the baseline percentage, as a share of the baseline percentage. For example, the 22.7 percentage point difference is nearly half (or 44.70%) of the baseline percentage. (44.70% = (50.8-28.09)/50.8)

female as compared to 28.1% of JAMS arbitrators—an 8.4 percentage point or 23.01% difference.

The race/ethnicity statistics tell an even more stark story of underrepresentation. JAMS arbitrators are much less racially/ethnically diverse than state and federal judges. The data on state judges come from George and Yoon's 2017 study where the authors collected data on all sitting state judges at both the trial court and appellate level in 2014. Their data set included more than 10,000 state judges. [111] The federal judges data are based on all Article III federal judges that were a sitting judge in 2017.[112] While federal and state judges are 20.2 and 19.6 percent people of color respectively, only 8.72 percent of JAMS arbitrators are non-white—a 10.88 percentage point or 55.51% difference. The Hispanic underrepresentation is about 50%; 2.66 percent of JAMS arbitrators are Hispanic as compared to 6.6 percent of federal judges and 5.4 percent of the state judges—a 2.74 percentage point or 50.74% difference. Black arbitrators are also underrepresented; Black people comprise 10.9 percent of the federal judiciary and 7.2 percent of the state judiciary but just 3.87 percent of the JAMS roster (a 3.33 percentage point or 46.25% difference) and 2.76 percent of the AAA roster (a 4.44 percentage point or 61.67% difference). Asian population share of the JAMS roster is comparable to the Asian population share of federal judges (1.94 percent of JAMS arbitrators are Asian and 2.0 percent of federal judges are Asian).[113]

A color divide between arbitrators and ABA lawyers also exists. Arbitrators make up 15.2 percent of the bar association as compared to the 8.72 of JAMS arbitrators—a 6.48 percentage point or 42.63% difference.

In summary, the underrepresentation of diverse neutrals in the population of JAMS and AAA arbitrators is substantial, not just relative to the U.S. population, but also relative to the population of *all other U.S. jurists*. Women and people of color are both underrepresented relative to these benchmarks, but people of color are underrepresented to a greater extent.

4. Beyond Race, Ethnicity and Gender: Other Descriptive Statistics for JAMS arbitrators

Race/ethnicity and gender are certainly not the only important dimensions of diversity within the US arbitrator population. Table 4 presents general descriptive statistics for the pool of JAMS arbitrators. Age and judicial experience were two of the other characteristics that were collected for my

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111. Tracey George and Albert Yoon, *Measuring Justice in State Courts: The Demographics of the State Judiciary*, 70 VAND. L. REV., 1887, 1901 (2017).

112. Authors calculations from public tableau using federal data. The sample includes only judges active as of 2017.

113. Comparable Asian state judiciary statistics are not available.

JAMS data. In my data, the average arbitrator was about 72 years old. [114] This is much older than ABA lawyers (median age 47.5) and slightly older than the federal judges (average age 69). [115]

Judicial experience is pervasive amongst JAMS arbitrators. More than half of JAMS arbitrators are retired judges (57.87%). Moreover, those arbitrators that previously sat on the bench have considerable judicial experience—over 20 years on average—and are more likely to be former state judges (72.38%) than federal judges (21.76%). A small minority of former judges have experience on both the state and federal bench (4.60%).

Interestingly, within the JAMS population, Black and Hispanic arbitrators are more likely to be retired judges than white arbitrators. 81.25 percent of Black arbitrators and 72.23 percent of Hispanic arbitrators are retired judges as compared to only 56.50 percent of white arbitrators. [116] Female arbitrators are also more likely to be retired judges than male arbitrators, but the difference is smaller; 60.34 percent of female arbitrators were former judges as compared to 56.90 percent of male arbitrators.

B.   Demand-Side Analysis: Selection Effects

One of the primary concerns about supply-side diversification efforts is that they do not go far enough. Even if arbitration rosters were to become significantly more diverse with newly added neutrals, the argument goes, there is no guarantee that such neutrals would be selected. In this section, I explore whether and to what extent diverse arbitrators are disproportionately under-selected for arbitration cases.

Before jumping into the analysis, two preliminary matters must be settled. First, it is important to clarify that there are technically two different types of selection questions that one could ask. First: was the arbitrator ever selected during the five-year sample period, 2015-2019? I refer to this as the **"ever-selected" selection dimension**. Of course, being selected at least one time within a five-year sample period is a very low bar in terms of arbitrator selection. So, the second question presents the more rigorous investigation. The second question is: conditional on ever being selected, how often was the

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114.   Arbitrator age is as of the time of the case outcome. I computed this by taking the difference between the year in which the final case decision was made and the arbitrator's birth year. I estimated the arbitrator's birth year by subtracting 22 from the year listed as their college graduation year.

115. *Demographics*,   ABA,   https://www.abalegalprofile.com/demographics.php#anchor8 [https://perma.cc/VZ2N-LH9Z] (accessed 11/6/2023). 2019 Federal judge data are from Francis X. Shen, *Aging Judges*, 81 OHIO ST. L.J., 235, 243 (2020). Similar age statistics were not available for state judges.

116.   Half of Asian JAMS arbitrators are retired judges.

arbitrator selected? **I refer to this as the "frequency-of-play" selection dimension**.

Secondly, we must fix what we mean by under-selection (and over-selection). For the purposes of this analysis, we will assume that, in the absence of discrimination, all sub-groups of diverse arbitrators would be selected in proportion to what would be expected based on their availability. For the ever-selected selection dimension, we will be comparing selected arbitrators to their roster share. [117] For example, if Black arbitrators make up 4% of the JAMS roster, but only 3% of those arbitrators that are selected at least once in the five-year sample period are Black, we will say that Black arbitrators are under-selected. Therefore, the **"roster share"** is the appropriate benchmark for the ever-selected selection analysis.

For the frequency-of-play selection analysis, we need a slightly different benchmark. The frequency-of-play analysis asks how often a group of arbitrators gets to play given that they were selected to play at least once in the sample period. The proper benchmark for this analysis is the **"expected ratio,"** or the ratio of cases that one would expect that group to have based on the number of arbitrators in their group that were selected to arbitrate at least once. For example, suppose AAA has 100 arbitrators on their roster but only 50 are ever selected to arbitrate. Further, suppose that there are 20 female arbitrators on AAA's roster but only 5 that are ever selected to arbitrate. Doing the math, the female roster share is 20% (=20/100) but the expected ratio is only 10% (=5/50). In other words, we would only expect female arbitrators to receive 10% of the available cases because they only comprise 10% of the 50 arbitrators that were selected to arbitrate in the first place. So, the frequency-of-play analysis would conclude that if female arbitrators receive more than 10% of the available cases, then they are over-selected relative to their expected ratio.

Of course, there could be non-discriminatory reasons that the ever-selected selection rate could deviate from the roster share and that the frequency-of-play selection rate could differ from the expected ratio. For example, if diverse neutrals are relatively less experienced, then their selection rate could be lower than their roster rate because of party risk aversion.[118] Still, the roster rate (or expected ratio) is a useful starting benchmark for detecting statistically significant and meaningful differences that merit further explanation.

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117. In the absence of discrimination, I make the simplifying assumption that arbitrators would be selected at random and so the proportion of Black arbitrators that were ever selected would be equal to their roster share. This is equivalent to a binomial model, $X{\sim}B(n,p)$, where X is the number of Black arbitrators selected in n random trials where the probability of selecting a Black arbitrator in any given trial is p. The expected number of Black arbitrators in n trials would be $E[X]=n*p$.

118. *See* Green, *supra* note 22, at 2271.

In what follows, I measure both selection effects for JAMS and AAA arbitrators. Importantly, for AAA, I am now able to compute statistics for *all* categories (Asian, Black, Hispanic, female and retired judge) rather than just Black/non-Black. Recall that demographic information other than Black/non-Black does not exist for the full AAA roster because the arbitrators' profiles are not made publicly available on the AAA website. However, for the sub-sample of AAA arbitrators that are selected to arbitrate, I have access to their names and titles in the AAA case data. I can, therefore, use these data with machine learning algorithms to estimate race/ethnicity (Asian and Hispanic), binary gender (male, female) and judicial experience.

1. JAMS Selection Effects

I begin the JAMS selection analysis by briefly describing some key features of the sample of JAMS arbitration cases. Table 5 presents the JAMS case descriptive statistics. As discussed in Section V (Data Description), my sample runs from 2015 to 2019. It includes 5,636 cases. The majority of JAMS cases are employment matters (61.37%). The remainder are consumer matters (32.82%) and tort matters (5.80%). Non-businesses (meaning employees, consumers and tort grievants) initiate the vast majority of JAMS arbitration matters (88.27%). Cases take about a year to be resolved (average disposition time: 13.17 months) and most cases don't involve a hearing (87.90%). In terms of disposition, most cases get settled (71.20%). The next most common dispositions are award (12.56%), dismissal (9.05%), and withdrawal (5.38%). Less than two percent of cases are either abandoned or defaulted.

Along the ever-selected dimension, I find no evidence of statistically significant differential selection in terms of race/ethnicity or gender. Table 6A presents the results. For the 5,636 cases in my full sample, 288 of the 413 available JAMS arbitrators are selected to preside over at least one case in the five-year sample period. All groups of diverse arbitrators (Black, Hispanic, Asian, and female) are selected at a rate that is statistically indistinguishable from their roster rate. One interesting statistically significant finding is that retired judges are over-selected relative to their roster rate. 66.67% of the 288 selected arbitrators were retired judges; in comparison, only 57.87% of arbitrators on the JAMS roster are retired judges (p<0.001), a 15% difference.

Along the frequency-of-play dimension, I first restrict attention to those arbitrators whose caseloads are within the normal range of what is expected of an arbitrator. Some arbitrators are extremely active, single-handedly accounting for large shares of the JAMS caseload. For example, there is one Black arbitrator who independently accounted for almost half of all the cases assigned to Black arbitrators. Including that outlying, super-arbitrator in the sample would artificially inflate the general Black frequency-of-play selection rate,

making it seem larger than it actually is.[119] To illustrate the importance of dropping super-arbitrators generally from the analysis, I present two figures. Figure 1 gives four modified box plots side by side, one for each of the four racial/ethnic groups under study (Black, Hispanic, Asian and white). The goal of a modified boxplot is to give the reader a visual sense of how far away the outlying, super-arbitrator caseloads are from the normal or usual arbitrator caseloads. For Black arbitrators, for example, the super-arbitrator mentioned above has a caseload is 131 cases—far above the rest of the caseloads for the other Black arbitrators. As is clear from the modified box plots, the inclusion of these super-arbitrators in the analysis would artificially inflate our sense of the overall activity level of the arbitrators.

To focus clearly on arbitrators with usual or regular caseloads, I separate out *all* super-arbitrators, regardless of demographic background. Using the Range Rule of Thumb,[120] I define a super-arbitrator to be any arbitrator, of any background, whose caseload is more than the average arbitrator caseload by two times the caseload standard deviation. Using this definition[121], there are 11 outlying super-arbitrators, one Black (the same arbitrator mentioned above) and 10 white. This means that of the 413 total arbitrators on the JAMS rosters, 277 arbitrators were selected to arbitrate at least once *and* had a normal caseload. In total, those 277 arbitrators oversaw 4,361 cases. Among these 277 arbitrators, there were 7 Asian arbitrators, 12 Black arbitrators, 9 Hispanic arbitrators, 81 female arbitrators, and 184 retired judges. To give the reader a visual sense of what regular caseloads look like, Figure 2 presents the same boxplots given in Figure 1 but this time excludes outlying arbitrators. When the data are laid out in this way, we can now see that Hispanic and white arbitrators have a similar caseload ranges. Black arbitrator caseloads are more concentrated within a narrower range. Asian arbitrators have a caseload that is even more compressed.

The next step in the frequency-of-play analysis is to examine whether each of those groups of arbitrators received their expected share of the 4,361 cases. In the absence of discrimination, we would expect that the selected Asian arbitrators would receive 7/277 or 2.53% of the cases, the selected Black

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119. Similarly, there could be arbitrators that are barely active, arbitrating very few times in the sample period. Including those outlying, occasional arbitrators in the sample would artificially deflate the frequency-of-play selection rate, making it seem smaller than it actually is. In my sample, however, there are not any occasional arbitrators.

120. The Range Rule of Thumb is a statistics theorem that approximates that for *any* distribution, normal or not, unusual data values will lie beyond two standard deviations of the mean. Similarly, Chebychev's Theorem approximates that ¾ of *any* distribution lies within two standard deviations of the mean.

121. Amongst my sample of 288 selected arbitrators, the mean caseload is 19.57 cases in the sample period and the standard deviation is 25.42 cases. Therefore, the outlier boundary is 19.57+(2*25.42) or 70.41 cases.

arbitrators would receive 12/277 or 4.33% of the cases and so on. Of course, there may be non-discriminatory reasons that the share of cases apportioned to each group might deviate from this benchmark, but as stated earlier, we take their expected share as a starting point to detect discrimination.

Table 6B presents the frequency of play selection results for JAMS arbitrators with usual caseloads. I find that Asian and Black arbitrators are both under-selected. Specifically, Asian arbitrators receive only 1.44% of cases; this is 43% lower than their expected ratio of 2.53%. Similarly, Black arbitrators receive only 3.39% of cases even though they account for 4.33% of selected arbitrators—a 22% difference. To put this comparison into more concrete terms, if Black arbitrators were to receive their expected ratio of 4.33% of cases, this would amount to about 41 more cases in total across all Black arbitrators, or about three additional cases per Black arbitrator across all five years of the sample. The comparable number of "missing" cases for Asian arbitrators is about 47 in total or about seven missing cases per Asian arbitrators across all five years. By contrast, two groups are over-selected. First, women arbitrators are slightly over-selected by about 5%—women arbitrators receive 30.77% of cases but their expected ratio is only 29.4%. Second, former judges are over-selected along the frequency of play dimension by an even greater margin. Retired judges decided 74.29% of JAMS cases, but account for only 66.43% of selected arbitrators. Former judges, therefore, appear to be highly preferred within the JAMS arbitrator selection process, both along the ever-selected and frequency of play dimensions.

Given the preference for former judges, it is curious that Black arbitrators are not over-selected, rather than under-selected. As a reminder, in Section VI.A.4., we found that Black arbitrators were more likely to be former judges than their white male counterparts. To investigate this further, I computed the frequency-of-play selection rates for Black, Hispanic, white male, and white female former judges. (See Table 6B). I find that for all categories of judges except Black judges, the frequency-of-play selection rate is larger than what would be expected. Black former judges are chosen at a rate that is statistically indistinguishable from their expected ratio. On the other hand, Hispanic judges are over-selected by 39%, white male judges by 14% and white female judges by 12%. The lack of preference for Black former judges is unexpected given that Black former judges are more qualified according to two metrics: prior experience as a federal judge (as opposed to a state judge) and total years of judicial experience. As Table 6C shows, Black former judges were the most likely group to have prior experience in the federal judiciary; 44% of Black former judges previously sat on the federal bench. The comparison numbers for Hispanic, white male and white female former judges are 37.5%, 29.57% and 10.64% respectively. Moreover, Black former judges had much more prior experience on the bench generally. Black former judges averaged 28 years on

the bench. All other groups of former judges averaged 21 years of prior judicial experience. Based on these metrics, one might expect that Black former judges would be over-selected for arbitration.

One possible explanation for the relative under-selection of Black former judges is tenure at JAMS. Table 6C shows that Black former judges, despite being the most qualified in terms of judicial experience, have the lowest tenure at JAMS. Black former judges on average have been affiliated with the organization for almost five years whereas Hispanic, white male and white female former judges have been there for six, nine, and eight years, respectively. If time spent in the organization is driving the selection amongst former judges, perhaps because of connections with prior clients and networking, then that might explain at least some of the relative under-selection of over-qualified Black former judges.

To conclude, the JAMS selection effects analysis yielded some surprising results. First, along the ever-selected dimension, race/ethnicity and gender do not seem to be important factors. Regardless of race/ethnicity and gender, JAMS arbitrators are selected into the arbitration pool at a rate that is statistically indistinguishable from their (very low) roster rate. Differences appear, however, when we investigate the frequency with which selected arbitrators are selected to arbitrate. When we restrict attention to arbitrators that have a normal caseload, we find that Asian and Black arbitrators are under-selected by 43% and 22%, respectively. Women arbitrators are slightly over-selected by 5%. Former judges also enjoy preferential treatment when it comes to case selection, both along the ever-selected dimension (15% over-selection) and the frequency of play dimension (12% over-selection). This judge advantage seems to help white and Hispanic former judges but not Black former judges. One possible explanation for this discrepancy is that Black former judges, while being significantly more experienced than other groups in terms of years on the bench, have less tenure at JAMS.

2. AAA Selection Effects

As with the JAMS selection effect analysis, I begin the AAA analysis with a description of the AAA cases sample. I have the universe of all cases that AAA reported in the third quarter 2020 disclosures, a total of 19,994 cases. Table 7 presents the descriptive statistics for this sample. Just like the JAMS sample, the AAA sample runs from 2015 to 2019; most cases end in settlement (62.80%); and most cases (91.28%) are initiated by the non-business entity (e.g., a consumer, employee, or homeowner). There are some relevant differences, though, between the AAA and JAMS cases. For example, AAA cases are mostly consumer matters (63.71%) rather than employment disputes (36.29%). The JAMS organization, on the other hand, predominately handles

employment cases (61.37% employment, 32.82% consumer, and 5.80% torts). Perhaps owing to this compositional difference in cases, AAA cases are resolved slightly faster than JAMS cases (11 months for AAA vs 13 months for JAMS, on average).

As a reminder from the supply side analysis (supra Section VI.A.2.), Black arbitrators make up 2.76% of the national AAA roster. A comparison between this base roster rate and the percent of AAA arbitrators that are selected to oversee a case at least once during the five-year sample period tells us whether Black arbitrators are under- or over-selected along the ever-selected dimension. As Table 8A shows, a total of 2,772 AAA arbitrators were selected to manage the 19,994 cases that were disposed between 2015 and 2019. Of these 2,772 arbitrators, 82 were Black—a selection rate of 2.96%. The difference between 2.76 and 2.96 is statistically significant ($p<0.001$), and represents a 7% difference. Thus, along the ever-selected dimension, Black arbitrators are slightly over-selected relative to their (very low) population ratio.

Table 8A also gives the ever-selected selection rates for other diverse categories of AAA arbitrators. Unfortunately, I do not have AAA population ratios for Asians, Hispanics, women or former judges, to compare these selection rates to. One interesting finding is that these AAA ever-selected ratios are consistently smaller than the JAMS ever-selected ratios. However, this may simply be an artifact of AAA having lower ratios of diverse arbitrators on their roster. Without more data on the demographic profile of the full AAA roster, it is impossible to say more.

The next step in the analysis is to determine, for those AAA arbitrators that are selected to arbitrate at least once, whether they are selected to "play" with a frequency that is proportional to their expected rate. As with the JAMS analysis, I restrict attention to AAA arbitrators whose caseload is within the usual range, dropping arbitrators whose super-high (or super-low) levels of arbitrating could artificially inflate (or deflate) the selection rate for their group. As Table 8B shows, I find that Asian, Black and female arbitrators are over-selected relative to their expected rate. Asian arbitrators comprise 1.18% of selected arbitrators but preside over 1.39% of cases (an 18% difference). Black arbitrators make up 2.96% of selected arbitrators but claim 4.13% of cases (a 40% difference); similarly, female arbitrators represent 21.86% of selected arbitrators but arbitrate 26.52% of cases (a 21% difference). Finally, there is a similar former-judge preference in the AAA selection process; former judges make up 12.11% of selected judges but claim 13.41% of cases (an 11% difference).

Dividing AAA cases up by case type reveals an interesting selection dynamic. Table 8C presents the results. Specifically, I find that both Black and female arbitrators claim a greater share of employment matters than the consumer matters. Combined, Black and female arbitrators claim 41% of

employment cases but only 25% of consumer cases. Also, for both employment and consumer matters, Black and female arbitrators claim their expected share of each type of case, if not more. Black arbitrators were selected in proportion to their expected share for employment cases and over-selected relative to their expected share for consumer cases (3.29% actual vs 2.37% expected—a 39% difference). Female arbitrators were over-selected for employment cases (35.43% actual vs 32.03% expected—an 11% difference) and for consumer cases (21.83% actual vs 19.15% expected—a 14% difference). Quite surprisingly, white males are slightly under-selected by about 5%. Though white male arbitrators still claim the majority of both types of cases, their actual share of cases is slightly less than their expected share. White males are selected for 58.29% of employment claims, though their expected rate is 61.37%—a five percent difference. Similarly, white males are selected for 73.56% of consumer claims, though their expected rate is 77.20%—also a five percent difference.

In summary, for AAA, along the ever-selected dimension, I find that Black arbitrators are selected at a rate that is slightly greater than their (low) rate in the arbitrator pool. (Unfortunately, because of AAA data unavailability, it is not possible to assess ever-selected proportionality for other groups of AAA arbitrators.) Along the frequency of play dimension, for arbitrators that have normal caseloads, I find that Asian, Black and female arbitrators tend to be selected at a rate that exceeds their expected rate. In addition, I find that Black and female arbitrators tend to be selected for employment cases more often than they are selected for consumer cases. White male arbitrators still receive the majority of both employment and consumer cases, but the number of cases that they receive is slightly lower than expected based on how often they are selected.

CONCLUSION AND DISCUSSION

Relying on publicly available arbitrator profiles, court documents, artificial intelligence machine learning algorithms, and publicly available records from forced arbitrations, this article presents an original data set of AAA and JAMS arbitration cases and *individual-level* arbitrator demographic characteristics, including gender, judge status, and—for the first time ever—race and ethnicity. Equipped with these novel data, this study has four main findings.

First, with respect to the diversity of the AAA and JAMS rosters, this study suggests that women and people of color are both underrepresented relative to all important benchmarks (the U.S. population, and the populations of

American lawyers and judges), but people of color are underrepresented to a greater extent.[122]

Second, the analysis suggests that selection issues exist but only along the frequency of play dimension. For both JAMS and AAA, I found no evidence of statistically significant under-selection along the ever-selected dimension for any group of diverse arbitrators. Of course, this is a low bar, requiring only that the proportion of diverse arbitrators that arbitrate at least one time in the five-year period is equal to that group's roster share. When one considers that the roster share for diverse neutrals is already low, parity along the ever-selected dimension is even less satisfying. Conditional on being ever-selected, the frequency of play analysis asks how often a group of arbitrators gets to play given that they were selected to play at least one time in the sample period. Here, I find some differences between JAMS and AAA.

For JAMS, I find that Asian and Black arbitrators receive fewer cases than what one would expect given their share of the selected arbitrator pool. Over the five-year sample period, the analysis suggests that, if cases were randomly assigned to JAMS arbitrators that were selected at least once, each Black arbitrator would have received three more cases and each Asian arbitrator would have received seven more cases. Of course, it is possible that non-discriminatory reasons could explain these differences, but the existence of the differences does merit further explanation. One interesting finding is that Hispanic, white male and white female former judges are all over-selected relative to their expected rates, but Black former judges are not, despite having the most judicial experience. A possible explanation for this finding is that Black former judges have less JAMS tenure than other groups of former judges. To the extent that this relative under-selection is due to networking or connections, campaigns to promote and advertise these highly qualified arbitrators would seem to help not just these arbitrators but also the parties that could benefit from their services. More generally, as the diversity of the JAMS arbitrator roster (hopefully) increases over time, it seems that the challenge will be to increase the frequency of play for new diverse arbitrators.

Unlike JAMS, AAA does not publish public web profiles for its arbitrators, so what we can learn about selection dynamics is necessarily limited.[123] For the

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122. Also concerning is the fact that, because of the voluntary nature of the CCCP 1281.96 survey, arbitrators of color seem to be represented in the survey results at rates that are higher than their true roster share. This overly optimistic depiction of arbitrator diversity could potentially be counter-productive to long-run efforts to diversify the arbitrator labor pool if arbitration firms use these survey results as a yard stick to gauge progress. To address this issue, the California legislature should consider revising 1291.96(12) to make the survey mandatory for all arbitrators. Arbitrators could still, as now, decline to provide demographic information, but it is possible that they won't. Finally, for their part, arbitration providers should, either on their own or with the urging of the legislature, clarify (for themselves, for survey respondents, and for the public) which people are definitionally included in the "Hispanic or Latino" category so that the survey data can be compared with other data sources.

ever-selected dimension, only Black arbitrators can be studied. I find slight over-selection of Black arbitrators (2.96% selection rate vs 2.76% roster rate—a 7% difference). As previously mentioned, though, over-selection relative to the very low roster rate of 2.76% is a low bar to meet, especially when considering that the only requirement is that a Black arbitrator be chosen at least once in the five-year sample period. For the frequency of play dimension, I am able to study dynamics for all diverse groups of neutrals, not just Black arbitrators. I find that some categories of diverse arbitrators (Asians, Blacks, and women) are over-selected along the frequency of play dimension. Future work should investigate parity between diverse arbitrators and white male arbitrators along other important dimensions besides selection, such as compensation. For example, I find that AAA Black and female arbitrators claim a large share of AAA employment cases (41%). White males arbitrators, on the other hand, while still claiming the majority of employment cases, are slightly under-selected relative to their expected share. What is unclear, however, is whether Black and female arbitrators are compensated for their arbitration services at the same rate as their white male counterparts. Certainly, true parity requires not just proportional selection but also parity in compensation.

Third, given the first two results, my data suggest that diversity issues exist both along the labor supply dimension and the labor demand dimension within U.S. arbitration.

Fourth, finally, and perhaps most importantly, this study finds that future empirical work on diversity in arbitration will be severely hindered unless more and better data are available to researchers. Below are three concrete and specific recommendations:

> 1.   **AAA should release demographic data at the individual arbitrator level, or if not, the names and titles of the arbitrators on their full roster.**
>
> As was mentioned several times throughout this study, AAA currently provides no demographic data for its individual arbitrators. This is deeply problematic because it means that (1) the demographic profile of the full AAA population cannot currently be measured and (2) under-and over-selection for AAA arbitrators, along the ever-selected dimension, cannot be measured. At a minimum, AAA needs to make public the names and titles for all of its rosters (national, national Large and Complex, NY Large and Complex) so that machine learning techniques can be used to estimate Hispanic identity, Asian identity, gender, and judicial experience. Importantly, it is currently not possible to reliably estimate Black identity from

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123.   It is important to acknowledge that it is only because JAMS is so transparent with its arbitrator profiles that we can learn as much as we have about their selection dynamics.

machine learning algorithms, so unless the AAA updates the data that they released during the Shawn Carter litigation, it will not be possible to track any further improvements to Black diversity in the future.

2.   JAMS should release demographic data at the individual arbitrator level in an electronic format.

While JAMS is clearly ahead of AAA in terms of publishing the demographic profile of its individual arbitrators on their web page, the organization can go much further in supporting future diversity studies. For example, the process of extracting demographic data from the individual arbitrator web profiles is extraordinarily time-consuming, and, of course, susceptible to error. To the extent that JAMS tracks basic information on its roster of neutrals (race, ethnicity, gender, and judicial experience), it should release this simple information on its website in a spreadsheet format. Arguably, these data are already made public on the arbitrator profiles. By providing the same data in spreadsheet format, JAMS would facilitate future diversity studies that could potentially help them to improve their own diversity efforts.

3.   **The CCCP 1281.96 survey should be mandatory and not voluntary for all arbitrators**.

Because the CCCP survey is a voluntary survey rather than a mandatory one, it risks producing data that are not representative of *any* arbitrator roster. Unless the legislature requires the CCCP to be mandatory for all arbitrators or unless arbitrator providers independently require full survey participation for all their arbitrators, the CCCP survey will be limited in its utility. This is especially true of specialized rosters like the AAA Large and Complex rosters. As was first brought to light in the Shawn Carter litigation, Black arbitrators are particularly under-represented on that roster of arbitrators. To improve diversity recruitment efforts, we need better aggregate data from arbitration providers on the diversity of the *supply* of US arbitrators so that we can track our progress. Better aggregate data require that the CCCP survey be collected as a mandatory response survey rather than as a voluntary response survey.

TABLES AND FIGURES

Table A1: Variations in Procedural Rules when the Consumer / Employee is the Claimant and Arbitration Arises Out of a non-negotiable mandatory arbitration clause in a consumer contract or employer-promulgated plan				
	Consumer		Employment	
	AAA	JAMS	AAA	JAMS

Which rules apply?	• AAA Consumer Arbitration Rules (All Consumer Claims) • AAA Consumer Due Process Protocol Statement of Principles	• JAMS Streamlined Rules (Consumer Claims under $250,000) • JAMS Policy on Consumer Arbitrations Pursuant to Pre-Dispute Clauses Minimum Standards of Procedural Fairness	• AAA Employment Arbitration Rules • AAA Employment Due Process Protocol • AAA Policy on Employment ADR	• JAMS Employment Arbitration Rules & Procedures • JAMS Policy on Employment Arbitration Minimum Standards of Procedural Fairness
Can consumer/ employee go to court?	Yes, but only small claims court	Yes, but only small claims court	No	No
Desk Arbitration or Live Hearing?	Desk Arbitration[124]	Live Hearing	Live Hearing	Live Hearing
Can the consumer/employee participate in arbitration selection?	No, the arbitrator is appointed.	Yes, through strike and rank procedure. Consumer gets list of three, strikes one, ranks two.	Yes, through strike and rank procedure. No specific number of candidates to be initially listed, struck or ranked.	Yes, through strike and rank procedure. Consumer gets list of at least 5, strikes at most two, ranks rest.
What fees is the consumer/employee responsible for?	$200 filing fee	$250 filing fee	$300 filing fee	$400 filing fee
What fees is the business responsible for?	• Arbitrator Fee ($1,500) • Case Management Fee ($1,400) • No	• Arbitrator Fee (based on arbitrator-specific rate) • Case Management Fee	• Arbitrator Fee (based on arbitrator-specific rate) • Case Management Fee ($750)	• Arbitrator Fee (based on arbitrator-specific rate) • Case Management Fee

[124] If no claims exceed $25,000, then the case must be heard via a desk arbitration. The consumer can ask for an exception to this rule but the arbitrator makes the final decision.

	Counterclaim Fees	(12% of arbitrator's fee) • Counterclaim Fee ($1750)	• No Counterclaim Fees • Respondent Fee ($1900) • Hearing Room Fee	(12% of arbitrator's fee) • Counterclaim Fee ($1750)
How much are the arbitrator fees?	Flat fee of $1,500 per case	Determined by the arbitrator's rate.	Determined by the arbitrator's rate.	Determined by the arbitrator's rate.

Table A2. Validity Check of Machine Learning Algorithms					
Asian Identification					
Verification Data Set	**ML Algorithm**	**Training Data Set**	**Number of Asians ID'ed by RAs**	**Number Correctly Identified by ethnicolr**	**Validity Rate[1]**
RA-categorized JAMS data	ethnicolr	Florida Driver's Licenses	8	4	50%
RA-categorized JAMS data	ethnicolr	Wikipedia	8	6	75%
Hispanic Identification					
Verification Data Set	**ML Algorithm**	**Training Data Set**	**Number of Hispanics ID'ed by RAs**	**Number Correctly Identified by ethnicolr**	**Validity Rate[2]**
RA-categorized JAMS data	ethnicolr	Florida Driver's Licenses	11	10	90.9%
RA-categorized JAMS data	ethnicolr	Wikipedia	11	8	72.7%
Gender Identification					
Verification Data Set	**ML Algorithm**	**Training Data Set**	**Number of Women ID'ed by RAs**	**Number Correctly Identified by genderdata**	**Validity Rate[3]**
RA-categorized JAMS data	genderdata	1970 Census	116	111	95.7%
Notes: 1. The validity rate here is the percent of RA-identified Asian arbitrators that were correctly identified by ethnicolr.					

2. The validity rate here is the percent of RA-identified Hispanic arbitrators that were correctly identified by ethnicolr.
3. The validity rate here is the percent of RA-identified women that were correctly identified by genderdata.

Table A3. Results of Machine Learning Analysis AAA Arbitrator Demographics (2,904 Total AAA Arbitrators in 2020 Q3 Disclosures)		
	N	Percent
Asian	32	1.10%
Black[1]	86	2.96
Hispanic	72	2.48
Female	651	22.42
Judicial Experience	365	12.57
N	2,904	

Notes:
[1] Black AAA arbitrators were identified using the Shawn Carter court documents, not with machine learning. Still, the figures are presented here so they can be seen alongside the machine learning results.

Table 1. JAMS Arbitrator Demographics (Gender and Race/Ethnicity Profile)				
	Column 1		Column 2	
	JAMS Arbitrators Population Data (Compiled by Chandrasekher)[1] (2020) Full Roster: 413 Arbitrators		JAMS Arbitrators Survey Data (CCCP Section 1281.96)[2] (2020) Sample Size[3]: 277 Percent of Roster: 67.1%	
	N	Percent	N	Percent
Gender				
Female	116	28.09%	77	28.84%
Male	297	71.91	190	71.16
Race/Ethnicity				
American Indian or Alaska Native	0	0.0%	1	0.37%
Asian	8	1.94	8	2.94
Black or African American	16	3.87	11	4.04
Hispanic or Latino	11	2.66	6	2.21
Pacific Islander	0	0.00	0	0.00

White	377	91.28	237	87.13
Other Race	1	0.24	2	0.74
More than One Race	0	0.00	7	2.57
Race/Ethnicity Condensed				
Black, Indigenous and People of Color (BIPOC)	36	8.72%	35	12.87%
White	377	91.28	237	87.13

Notes:
[1] Author's calculations from JAMS arbitrator web profiles.
[2] JAMS statistics from CCCP 1281.96 JAMS survey (2020). Survey on file with YJLF.
[3] A total of 299 JAMS arbitrators took the survey, but only 267 answered the gender question and 272 answered the race/ethnicity question. Therefore, the sample sizes for the gender and race/ethnicity questions are 267 and 272, respectively.

Table 2A. AAA Arbitrator Demographics (Gender and Race/Ethnicity Profile)				
	AAA Arbitrators Population Data (Compiled by Chandrasekher)[1] (2018) Full Roster: 5,513 Arbitrators		**AAA Arbitrators Survey Data (CCCP Section 1281.96)[2] (2020) Sample Size[3]: 2,805 Percent of Roster: 50.9%**	
	N	**Percent**	**N**	**Percent**
Gender				
Male			2,187	78.0%
Female			618	22.0
Race/Ethnicity				
American Indian or Alaska Native			2	0.1%
Asian			42	1.5
Black or African American	152	2.76%	107	3.9
Hispanic or Latino			101	3.7
Pacific Islander			3	0.1
White			2,425	88.0
Other Race			24	0.9

More than One Race			52	1.9
Race/Ethnicity Condensed				
Black, Indigenous and People of Color (BIPOC)			331	12.0%
White			2,425	88.0

Notes:
[1] Author's calculations from Shawn Carter lawsuit, Exhibit 3 (2018).
[2] AAA statistics from CCCP 1281.96 AAA survey. For access to the AAA CCCP 1281.96 survey, see *Consumer Case Information*, https://www.adr.org/sites/default/files/document_repository/ArbitratorDemographic Data_01132020.pdf [https://perma.cc/U9CJ-6ZGZ].
[3] A total of 5,513 AAA arbitrators were eligible to respond to the survey generally. Only 2,805 of the 5,513 AAA arbitrators responded to the gender question (the highest response rate for any question) and only 2,756 AAA arbitrators responded to the race/ethnicity question. Therefore, the sample sizes for the gender and race/ethnicity questions are 2,805 and 2,756, respectively.

Table 2B. AAA Arbitrator Demographics (National Roster vs Large and Complex Rosters)				
	Source	Black AAA Arbitrators	AAA Arbitrators	Percent
National Roster[1]	Shawn Carter Litigation (Exhibit 3)	152	5,513	2.76%
Large and Complex Roster (National)[1]	Shawn Carter Litigation (Exhibit 3)	18	>1000	<1.8
Large and Complex Roster (NY)[1]	Shawn Carter Litigation (Exhibit 3)	1	101	0.99

Notes:
[1] Author's calculations from Shawn Carter lawsuit, Exhibit 3 (2018).

Table 3. Comparative Statistics: Arbitrators, Lawyers, Federal Judges, State Judges, and the U.S. Population (Gender and Race/Ethnicity only)						
	JAMS Arbitrators (2020)[1] (from Table 1)	AAA Arbitrators (2018)[2] (from Table 2A)	ABA Lawyers (2019)[3]	Federal Judges (2017)[4]	State Judges (2014)[5]	U.S. Population (2019)[6]
Gender						

Male	71.91%			63.5%	73.6%	69.8%	49.2%
Female	28.09			36.5	26.4	30.2	50.8
Race/Ethnicity							
American Indian or Alaska Native	0.0%			0.5%	0.2%	--	1.3%
Asian	1.94			2.5	2.0	--	5.9
Black or African American	3.87	2.76		5.1	10.9	7.2	13.4
Hispanic or Latino	2.66			4.7	6.6	5.4	18.5[a]
Pacific Islander	0.00			0.4	0.1	--	0.2
White	91.28			84.8	79.8	80.4	60.1[b]
Other Race	0.24			--	--	7.0	--
More than One Race	0.00			1.9	0.5	--	2.8
Race/Ethnicity Condensed							
White	91.28%			84.8%	79.8%	80.4%	60.1%
Person of Color	8.72			15.2	20.2	19.6	39.9

Notes:
[1] Author's calculations from JAMS arbitrator web profiles. For additional details, see Section V.A.I.
[2] Author's calculations from Shawn Carter lawsuit, Exhibit 3 (2018).
[3] A.B.A., ABA PROFILE OF THE LEGAL PROFESSION 67 (2019).
[4] Author's calculations from public tableau using federal data. Only judges active as of 2017.
[5] Tracey E. George & Albert H. Yoon, *Measuring Justice in State Courts: The Demographics of the State Judiciary*, 70 VAND. L. REV. 1887, 1903-08 (2017); TRACEY E. GEORGE & ALBERT H. YOON, AM. CONSTITUTION SOC'Y FOR LAW & POLICY, THE GAVEL GAP: WHO SITS IN JUDGEMENT ON STATE COURTS?, https://www.acslaw.org/wp-content/uploads/2018/02/gavel-gap-report.pdf [https://perma.cc/X6B8-AFFV] (last visited Feb. 22, 2021).
[6] U.S. Census Population estimates (July 1, 2019), U.S. CENSUS BUREAU, https://www.census.gov, (last visited Feb. 9, 2021).
[a] This is the U.S. Census figure for Hispanic or Latino which, according to Census definitions, can include any race. *See Hispanic Origin*, U.S. CENSUS BUREAU, https://www.census.gov/topics/population/hispanic-origin.html [https://perma.cc/9Y6H-A57D] (last visited Feb. 22, 2021).
[b] This is the figure for white non-Hispanic, which is what I believe is reported in the

CCCP 1281.96 data, and what I capture in my JAMS population data. The
population figure for white including Hispanic is 76.3.

Table 4. JAMS Arbitrator Demographics[1], (2020) (Full Demographic Profile)		
Sample Size	413	
Percent of Roster	100%	
Roster Size	413	
Gender (N=413)		(N)
Male	71.91%	297
Female	28.09	116
Race/Ethnicity (N=413)		
American Indian or Alaska Native	0.0%	0
Asian	1.94	8
Black or African American	3.87	16
Hispanic or Latino	2.66	11
Pacific Islander	0.00	0
White	91.28	377
Other Race	0.24	1
More than One Race	0.00	0
Race/Ethnicity Condensed (N=413)		
Black, Indigenous and People of Color (BIPOC)	8.72%	36
White	91.28	377
Age as of 2020 (N=406)		
Mean	71.48 years	
Median	72 years	
Judicial Experience (N=413)		
Yes	57.87%	239
No	42.13	174
Judicial Experience by Race/Ethnicity		
Asian (N=8)	50.00%	4
Black (N=16)	81.25	13
Hispanic or Latino (N=11)	72.23	8
BIPOC (N=36)	72.22	26
White (N=377)	56.50	213
Judicial Experience by Gender		
Male (N=297)	56.90%	169
Female (N=116)	60.34	70

Type of Judicial Experience (former judges only, N=239)		
Federal judge only	21.76%	52
State judge only	72.38	173
Both federal and state judge	4.60	11
Non-U.S. judge	1.26	3
Years of Judicial Experience (former judges only, N=239)		
Mean	21.06 years	
Median	21 years	
Years affiliated with JAMS (N=398)		
Mean	8.8 years	
Median	7 years	
Primary Office (N=413)		
Northern California	18.89%	78
Southern California	18.89	78
New York	11.62	48
Illinois	6.78	28
Colorado	4.60	19
Massachusetts	4.60	19
Washington	4.36	18
D.C.	4.12	17
Florida	4.12	17
Georgia	3.87	16
Texas	3.87	16
London, UK	3.39	14
Pennsylvania	3.15	13
Nevada	2.66	11
Canada	1.45	6
Minnesota	1.45	6
Missouri	1.21	5
Michigan	0.97	4
Notes: [1] Author's calculations from JAMS arbitrator web profiles.		

Table 5. JAMS Cases: Descriptive Statistics (Full Sample) (N=5,636)		
Case Outcome		**Percent**
Abandoned	100	1.77%

Award	708	12.56
Default	2	0.04
Dismissal	510	9.05
Settlement	4,013	71.20
Withdrawal	303	5.38
Case Type		
Consumer	1,850	32.82%
Employment	3,459	61.37
Tort	327	5.80
Case Sub-Type		
Consumer (N=1,850)		
Construction	27	1.46%
Credit	683	36.92
Debt Collections	260	14.05
Goods	248	13.41
Real Estate	31	1.68
Telecommunications	85	4.59
Other	516	27.89
Employment (N=3,459)	3,459	100%
Tort (N=327)		
Health Care	228	69.72%
Insurance	10	3.06
Personal Injury	89	27.22
Case Initiated by:		
"Consumer"	4,975	88.27%
"Non-Consumer"	549	9.74
Unknown	112	1.99
Year Case Filed		
2015	695	12.33%
2016	975	17.30
2017	1,215	21.56
2018	1,479	26.24
2019	1,272	22.57
Disposition Time (in Months)		
Mean	13.17	
Median	11.80	
Hearing		
Yes	682	12.10%
No	4,954	87.90
Hearing Type if Hearing (N=682)		
Documents only	17	2.49%
In person	534	78.30
Via telephone or videoconference	131	19.21

	Number of Arbitrators Selected in Group	Total Number of Arbitrators Selected	Selection Rate (in percent)	Population Ratio (in percent) (from Table 4)	Outcome
	Table 6A. JAMS Selection *Ever-Selected Selection Rate* **By Race/Ethnicity, Gender, and Other Characteristics (288 Arbitrators Selected from the 413 Available JAMS Arbitrators)**				
Asian	7	288	2.43	1.94	No SS Difference
			(0.91)		
Black	13	288	4.51	3.87	No SS Difference
			(1.23)		
Hispanic	9	288	3.13	2.66	No SS Difference
			(1.03)		
Arbitrators of Color	30	288	10.42	8.72	No SS Difference
			(1.80)		
Female	87	288	30.21	28.09	No SS Difference
			(2.71)		
Retired Judge	192	288	66.67***	57.87	Over-Selected
			(2.78)		

Notes:
Standard errors in parentheses: +p < .10; * p < .05; ** p < .01; *** p < .001

	Number of Cases per Group	Total Number of Cases	Selection Rate (in percent)	Expected Ratio[1] (in percent)	Outcome
	Table 6B. JAMS Selection *Frequency-of-Play Selection Rate* **By Race/Ethnicity, Gender and Other Characteristics** **Arbitrators with Regular Caseloads (N=277 Arbitrators)** (Caseload is Within 2 Standard Deviations of the Mean Arbitrator Caseload)				
Asian (N=7)	63	4,361	1.44*** (0.18)	2.53	Under-selected
Black (N=12)	148	4,361	3.39*** (0.27)	4.33	Under-selected
Hispanic or Latino	177	4,361	4.06	3.97	No SS

(N=9)			(0.30)		Difference
Female (N=81)	1,342	4,361	30.77* (0.70)	29.24	Over-Selected
Retired Judge (N=184)	3,240	4,361	74.29*** (0.66)	66.43	Over-Selected
Black Judges (N=9)	133	4,361	3.05 (0.26)	3.25	No SS Difference
Hispanic Judges (N=8)	175	4,361	4.01*** (0.30)	2.89	Over-Selected
White Male Judges (N=115)	2,073	4,361	47.53*** (0.76)	41.52	Over-Selected
White Female Judges (N=47)	829	4,361	19.01*** (0.59)	16.97	Over-Selected

Notes:

[1] The "expected ratio" is the ratio of cases that one would expect each group of arbitrators to receive based on the number of arbitrators in that group that were selected to arbitrate. For example, 277 JAMS arbitrators (with regular caseloads) were selected to arbitrate from the roster. Of those 277 selected, 7 were Asian arbitrators. In the absence of any discrimination, we would expect Asian arbitrators to take a proportional share (7/277 or 2.53%) of the available 4,361 cases. If Asian arbitrators were selected for more than 2.53% of the available cases, then we would say that they were "over-selected." If Asian arbitrators were selected for less than 2.53% of the available cases, then we would say that they were "under-selected." Here, we find that Asian arbitrators were under-selected because they were selected for 63 of the available 4,361 cases, or 1.44%, which is smaller than their expected share of 2.53%.

[2] Standard errors in parentheses: $+p < .10$; $* p < .05$; $** p < .01$; $*** p < .001$

Table 6C. JAMS Selection
Frequency-of-Play Selection Rate

Arbitrators with Regular Caseloads who were Formerly Judges

Details on Judicial Experience and Tenure at JAMS

	Years of Judicial Experience Mean (SD)	Former Federal Judge Percent	Tenure at JAMS (in years) Mean (SD)	Selection Rate	Expected Ratio	Outcome
Black Judges (N=9)	28.44 (7.50)	44.44	4.78 (3.15)	3.05 (0.26)	3.25	No SS Difference
Hispanic Judges	21.38 (7.60)	37.50	6.38 (5.63)	4.01*** (0.30)	2.89	Over-Selected

(N=8)						
White Male Judges (N=115)	21.30 (7.27)	29.57	8.7 (6.11)	47.53*** (0.76)	41.52	Over-Selected
White Female Judges (N=47)	21.23 (7.18)	10.64	7.94 (7.17)	19.01*** (0.59)	16.97	Over-Selected
Notes:						
Standard errors in parentheses: +p < .10; * p < .05; ** p < .01; *** p < .001						

Table 7. AAA Cases: Descriptive Statistics (Full Sample) (N=19,994)		
Case Outcome		
Administrative Disposition	321	1.61%
Award	4,764	23.83
Dismissal	1,572	7.86
Impasse	3	0.02
Settlement	12,557	62.80
Withdrawal	777	3.89
Case Type		
Consumer	12,739	63.71%
Employment	7,255	36.29
Case Sub-Type		
Consumer (N=12,739)		
Financial Services	4,358	34.21%
Real Estate and Construction	3,280	25.75
Car Sales/Lease	1,274	10.00
Telecommunications/Wireless	1,262	9.91
Other	2,565	20.14
Employment (N=7,255)		
Restaurant/Food Service	1,179	16.25%
Retail	1,018	14.03
Healthcare	696	9.59
Financial Services	585	8.06
Other	3,777	52.06
Case Initiated by:		
"Consumer"		
Consumer	9,056	45.29%
Employee	6,970	34.86
Homeowner	2,224	11.12
"Non-Consumer"	1,744	8.72
Year Case Filed		
2015	2,656	13.28
2016	4,652	23.27

2017	4,502	22.52
2018	4,539	22.70
2019	3,645	18.23
Disposition Time (in Months)		
Mean	10.93	
Median	9.47	

Table 8A. AAA Selection
Ever-Selected Selection Rate
By Race/Ethnicity, Gender, and Other Characteristics
(2,772 Arbitrators Selected from the 5,513 Arbitrators on the AAA Roster)

	Number of Arbitrators Selected in Group	Total Number of Arbitrators Selected	Selection Rate (in percent)	Population Ratio (in percent) (from Table 2A)	Outcome
Asian	32	2,772	1.15		
Black	82	2,772	2.96*** (0.00)	2.76	Over-selected
Hispanic	69	2,772	2.49		
Arbitrators of Color	183	2,772	6.60		
Female	617	2,772	22.26		
Retired Judge	341	2,772	12.30		

Notes:
Standard errors in parentheses: +p < .10; * p < .05; ** p < .01; *** p < .001

Table 8B. AAA Selection
Frequency-of-Play Selection Rate
By Race/Ethnicity, Gender and Other Characteristics

Arbitrators with Regular Caseloads (N=2,635 Arbitrators)
(Caseload is Within 2 Standard Deviations of the Mean Arbitrator Caseload)

	Number of Cases per Group	Total Number of Cases	Selection Rate (in percent)	Expected Ratio[1] (in percent)	Outcome
Asian (N=31)	200	14,381	1.39* (0.10)	1.18	Over-Selected
Black	594	14,381	4.13***	2.96	Over-Selected

(N=78)			(0.17)		
Hispanic or Latino (N=65)	367	14,381	2.55 (0.13)	2.47	No SS Difference
Female (N=576)	3,814	14,381	26.52*** (0.37)	21.86	Over-Selected
Retired Judge (N=319)	1,929	14,381	13.41*** (0.28)	12.11	Over-Selected
White Male (N=1,946)	9,805	14,381	68.18*** (0.39)	73.85	Under-Selected

Notes:
[1] The "expected ratio" is the ratio of cases that one would expect each group of arbitrators to receive based on the number of arbitrators in that group that were selected to arbitrate. For example, 2,635 AAA arbitrators (with regular caseloads) were selected to arbitrate from the roster. Of those 2,635 selected, 78 were Black arbitrators. In the absence of any discrimination, we would expect Black arbitrators to take a proportional share (78/2,635 or 2.96%) of the available 14,381 cases. If Black arbitrators were selected for more than 2.96% of the available cases, then we would say that they were "over-selected." If Black arbitrators were selected for less than 2.96% of the available cases, then we would say that they were "under-selected." Here, we find that Black arbitrators were over-selected because they were selected for 594 of the available 14,381 cases, or 4.13%, which is greater than their expected share of 2.96%.
[2] Standard errors in parentheses: +p < .10; * p < .05; ** p < .01; *** p < .001

Table 8C. AAA Selection
Frequency-of-Play Selection Rate
By Race/Ethnicity, Gender and Case Type

Arbitrators with Regular Caseloads (N=2,635 Arbitrators)
(Caseload is Within 2 Standard Deviations of the Mean Arbitrator Caseload)

Employment Cases (5,066 cases) (N=893 Arbitrators)				Consumer Cases (9,315 Cases) (N=2,026 Arbitrators)			
	Number of Cases per Group	Percent	Expected Ratio		Number of Cases per Group	Percent	Expected Ratio
Black Arbitrators (N=48)	288	5.68 (0.33)	5.38	Black Arbitrators (N=48)	306	3.29*** (0.18)	2.37
Female Arbitrators (N=286)	1,793	35.43*** (0.67)	32.03	Female Arbitrators (N=388)	2,021	21.83*** (0.43)	19.15
White Male Arbitrators (N=548)	2,953	58.29*** (0.69)	61.37	White Male Arbitrators	6,852	73.56*** (0.46)	77.20

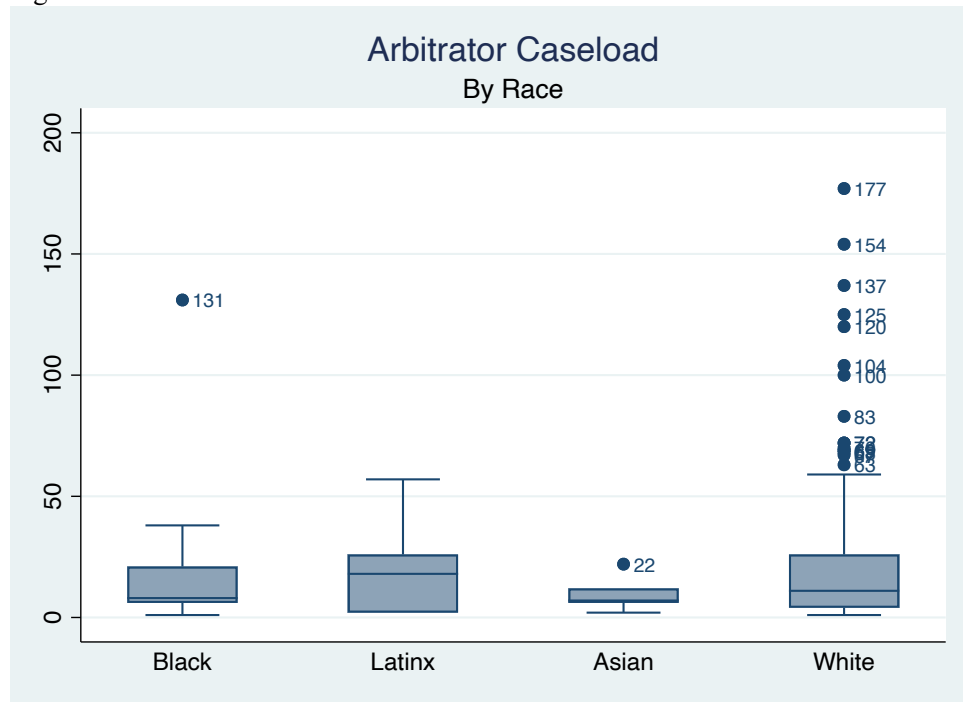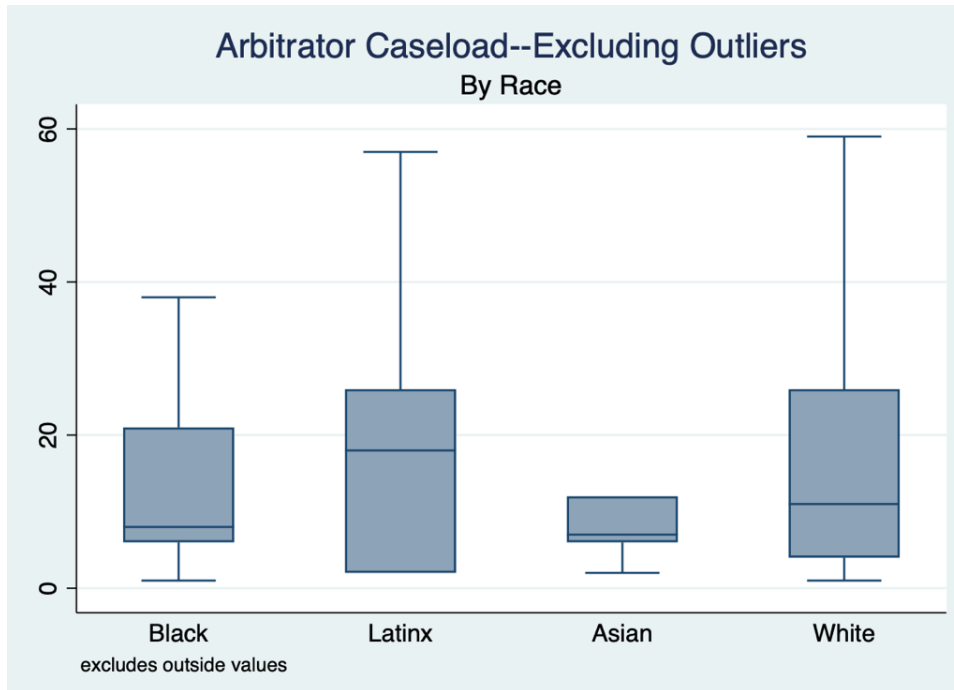|			(N=1,564)			
Total	5,066		Total	9,315		
Notes:						
Standard errors in parentheses: +p < .10; * p < .05; ** p < .01; *** p < .001						

Figure 1

Figure 2

Guide to Understanding Modified Box Plots (Figure 1)

Figure 1 gives four modified box plots side by side, one for each of the four racial/ethnic groups under study (Black, Latinx, Asian and White). The goal of the modified boxplot is to give us an idea of how far away the outlying arbitrator caseloads are from the bulk of the arbitrator caseloads. For each group, the modified boxplot shown has three distinct parts: the box itself, the whiskers above and below the box, and the dots above the top whiskers.

Let's briefly explain each of these parts. First, **the box**: the role of each box is to show us the location of three important numbers in the distribution of the arbitrator caseload for each demographic group. These important numbers are the third quartile, the median and the first quartile. (The third quartile is the arbitrator caseload that is so high that only 25% of arbitrators have a caseload that is above it, but most arbitrators (75%) have a caseload that is below it. The median arbitrator caseload is the arbitrator caseload that is in the middle (half of the arbitrators have a caseload above it and half have a caseload that is below it.) The first quartile is the arbitrator caseload that is so low that most arbitrators (75%) have a caseload that is above it and only 25% have a caseload that is below it.) Note that even though the lines show us the *location* of the third quartile, median, and first quartile, the actual values of these numbers are not given, simply because it would make our figure too cluttered. Second, **the**

dots: the role of the dots is to show us the location of the outlier arbitrator caseloads. Here, the number next to each dot is the value of the outlying arbitrator caseload. Finally, **the whiskers**: the role of the whiskers is to show us the location of the largest and smallest arbitrator caseloads that are not outliers.

Let's do an example using Figure 1. For Black arbitrators, the top line of the box is where the third quartile of the Black arbitrator caseload is. The middle line of the box is where the median of the Black arbitrator caseload is. The bottom line of the box is where the first quartile of the Black arbitrator caseload is. There is one outlying Black arbitrator whose caseload is 131 cases. The highest caseload amongst Black arbitrators that is not outlying is less than 50 cases.