Inequality on Appeal: The Intersection of Race and Gender in Patent Litigation

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Today, roughly 40% of U.S. lawyers are women, 15% are people of color, and 8% are women of color. Yet people of color, and women of all racial identities, rarely climb to the most elite levels of law practice. This Article, based on a first-of-its-kind, hand-coded dataset of the gender and perceived race of thousands of lawyers and case outcomes, provides a stark illustration of ongoing racial and gender disparities, focusing on the high-stakes arena of appellate patent litigation.

All appeals in patent cases nationwide are heard by the U.S. Court of Appeals for the Federal Circuit, a court that is itself diverse: out of twelve active judges, five are women and four are persons of color, two of whom are women of color. But, out of 6,000-plus oral arguments presented to the

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Federal Circuit in patent cases from 2010 through 2019, 93% were delivered by white attorneys. Barely 2% were by Black or Hispanic/Latino attorneys. Adding in data about gender, white male attorneys alone argued 82% of patent cases during the decade we studied. Women of color, by contrast, argued 2%.

The disparities we find bear no correlation to attorney performance. Appellants in Federal Circuit patent cases win about a quarter of the time and appellees win about three-quarters of the time — with no differences based on race, gender, or the intersection of the two. The one cohort of lawyers in our study that does *win more frequently is a small group of lawyers at large law firms who argue Federal Circuit patent appeals more frequently than anyone else. That group of roughly sixty-five lawyers is, like our dataset overall, overwhelmingly white and male.*

In general, our study tells a dispiriting story: despite increasing diversity among law students and lawyers and no connection between a lawyer's gender or perceived race and case outcomes, a lack of diversity persists at the legal profession's highest levels. However, we identify discrete areas of patent practice where women, people of color, and women of color are more visible — most notably, in representing the federal government (as opposed to private-sector clients) in patent appeals. Those original findings inform our proposals to make the patent system, and high-level law practice generally, more diverse and inclusive.

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INTRODUCTION

In June 2023, the U.S. Supreme Court outlawed affirmative action in higher education admissions.[1] Writing for the Court, Chief Justice Roberts quoted from Justice Harlan's dissent in *Plessy v. Ferguson*[2] to argue that, "[i]n view of the Constitution, in the eye of the law, there is in this country no superior, dominant, ruling class of citizens. There is no caste here."[3]

The dissenters disagreed. Justice Sotomayor responded that it is fantasy to believe that the Court's rule of "race-blindness" will remedy discrimination "in an endemically segregated society where race has always mattered and continues to matter."[4] "[R]acial inequality," her opinion noted, "will persist so long as it is ignored."[5]

[1] Students for Fair Admissions, Inc. v. President and Fellows of Harvard Coll., 600 U.S. 181, 230 (2023) [hereinafter *SFFA*].

[2] 163 U.S. 537, 559 (1896) (Harlan, J., dissenting).

[3] *SFFA*, 600 U.S. at 230 (internal quotation marks omitted).

[4] *Id.* at 328, 318 (Sotomayor, J., dissenting) (alteration in original).

[5] *Id.* at 384.

In the spirit of revealing inequality, this Article presents a novel study of demographics in an area of law practice that, at first glance, seems far removed from ongoing conversations about systemic racism and sexism: patent law. This Article spotlights the persistence of racial inequality, gender inequality, and the intersection of the two in the field. For instance, though less than half of all lawyers in the United States today are white men,[6] white men delivered more than four-fifths of all appellate oral arguments in patent cases from 2010 through 2019.[7]

The dominance of white men in patent litigation is often attributed to the underrepresentation of women and people of color in the scientific and technical fields thought necessary to practice patent law.[8] But the disparities we document are, we contend, better understood to flow from broader, structural barriers to the advancement of people who have not traditionally occupied positions of power in "elite" professions, such as large law firm litigation.[9]

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[6] *See Diversity of 2022 California Licensed Attorneys*, STATE BAR OF CAL., https://publications.calbar.ca.gov/2022-diversity-report-card/diversity-2022-california-licensed-attorneys (last visited Aug. 6, 2024) [https://perma.cc/946T-WVR5] (40% white men in California); MINORITY CORP. COUNS. ASS'N, U.S. LAW FIRM DIVERSITY SURVEY REPORT 2022, at 36 (2022), https://mcca.com/wp-content/uploads/2023/02/MCCA_US-Law-Firm-Diversity-Survey-2022.pdf [https://perma.cc/N6LY-ZGEZ] (50.5% white men, surveying 214 large law firms). Though our Article uses the terms 'men' and 'women' and 'male' and 'female,' we are aware of the shortcomings of binary conceptions of gender and how that binary incorporates assumptions about sexuality and sexual identity. *See infra* Part II.C.1.

[7] *See infra* Part II.C.1.

[8] *See, e.g.*, Matthew Bultman, *Diversity Woes in Patent Field Lead Lawyers to Try New Ideas*, BLOOMBERG LAW (Feb. 28, 2022, 2:01 AM PST), https://news.bloomberglaw.com/ip-law/diversity-woes-in-patent-field-lead-lawyers-to-try-new-ideas [https://perma.cc/XE2Q-WVZU] ("A science or engineering background is required to take the required Patent and Trademark Office's patent bar exam and register with the office. A lack of diversity in those fields narrows the patent pipeline."). For further discussion of the perceived pipeline problem in patent law practice, see *infra* notes 55–63.

[9] *Cf.* AM. BAR ASS'N, COMM'N ON WOMEN IN THE PROFESSION, LEGAL CAREERS OF PARENTS AND CHILD CAREGIVERS: RESULTS AND BEST PRACTICES FROM A NATIONAL STUDY OF THE LEGAL PROFESSION 1 (2023), https://www.americanbar.org/content/dam/aba/administrative/women/2023/parenthood-report-2023.pdf (last visited Aug. 7, 2024) [https://perma.cc/9K9D-HAJ7] [hereinafter AM. BAR ASS'N, CAREGIVERS] ("For the past 25 years, women and men have entered the legal profession in roughly equal numbers. Despite the steady influx of women lawyers, they continue to be much less likely to

For example, we find vast disparities along racial and gender lines among the law firm lawyers who present patent case arguments on behalf of litigants from the private sector[10] — a result that is perhaps unsurprising given the well-documented inequalities in law practice and the corporate world more generally.[11] But what *is* surprising is that racial and gender disparities dwindle when we look only at lawyers who argue patent cases *on behalf of the government*.[12] Among government patent lawyers, the proportion who are women, people of color, or women of color equal (and, in fact, slightly exceeds) the proportion of women, people of color, and women of color in the total population of practicing lawyers.[13]

attain the top levels of leadership in their organizations and the most powerful, prestigious, and highly compensated positions.").

[10] Among the private-sector lawyers in our dataset, 93% are white and 87% are male. *See infra* Part II.C.1.

[11] *See, e.g.*, FRANK DOBBIN & ALEXANDRA KALEV, GETTING TO DIVERSITY: WHAT WORKS AND WHAT DOESN'T 4 (2022) (showing that 16% of all white male employees at corporations with more than 100 workers are in management, a greater percentage than any other demographic group); Hassan Kanu, *"Exclusionary and Classist": Why the Legal Profession is Getting Whiter*, REUTERS (Aug. 10, 2021, 4:49 PM PDT), https://www.reuters.com/legal/legalindustry/exclusionary-classist-why-legal-profession-is-getting-whiter-2021-08-10 ("The percentage of Black and Native American attorneys has receded . . . since 2011. Black lawyers went from 4.8% of the profession to 4.7% in 2021, and Native Americans from 1% to less than half a percent. Those numbers are much lower than the 13% of Americans who are Black, and the 1.3% who are Native Americans.").

[12] Though there is some research documenting the greater racial and gender diversity in government jobs as compared to the private sector, *see, e.g.*, CTR. FOR AM. PROGRESS, PUBLIC WORK PROVIDES ECONOMIC SECURITY FOR BLACK FAMILIES AND COMMUNITIES (Oct. 23, 2020), https://www.americanprogress.org/article/public-work-provides-economic-security-black-families-communities [https://perma.cc/A2LE-TQZH] (noting racial diversity in government jobs); MCKINSEY & CO., TIPS FOR NEW GOVERNMENT LEADERS: UNLOCKING DIVERSITY AND INCLUSION 2 (Feb. 1, 2021), https://www.mckinsey.com/industries/public-sector/our-insights/tips-for-new-government-leaders-unlocking-diversity-and-inclusion [https://perma.cc/82FA-NYCH], it is often anecdotal. Our Article, by contrast, presents a systematic, comprehensive comparison of race and gender representation in appellate patent litigation.

[13] In our study, 48% of patent case arguments delivered on behalf of the government were by women, 15% were by lawyers who are persons of color, and 8% were by lawyers who are women of color. *See infra* Part IV.

Despite Chief Justice Roberts's claim, there is a caste system at work. This Article offers one stark illustration, as well as some ideas about how to change course.

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The U.S. Court of Appeals for the Federal Circuit, which has exclusive jurisdiction over all patent appeals nationwide,[14] sits for oral arguments one week a month. During any given argument week, the court will hear roughly 50 patent cases, meaning that about 100 lawyers will stand up to speak in its courthouse, barely a block away from the White House. On average, 93 of those 100 lawyers will be white. Five will be Asian. Only one will be Black. And only one will be Hispanic or Latino.[15]

[14] 28 U.S.C. § 1295(a)(1).

[15] As we explain below, in this Article we use the descriptors for race employed by the U.S. Census, though we are aware of the limitations of those categories and of terms such as "Hispanic," *see* G. CRISTINA MORA, MAKING HISPANICS: HOW ACTIVISTS, BUREAUCRATS, AND MEDIA CONSTRUCTED A NEW AMERICAN 83-118, 155 (2014), as well as other racial categories used by the census, *see, e.g.*, Students for Fair Admissions, Inc. v. President and Fellows of Harvard Coll., 600 U.S. 181, 291-92 (2023) (Gorsuch, J., concurring) (noting that the "Asian" category used by the census "sweeps into one pile East Asians (e.g., Chinese, Korean, Japanese) and South Asians (e.g., Indian, Pakistani, Bangladeshi), even though together they constitute about 60% of the world's population"). *See also* K.K. Rebecca Lai & Jennifer Medina, *An American Puzzle: Fitting Race in a Box*, N.Y. TIMES (Oct. 16, 2023), https://www.nytimes.com/interactive/2023/10/16/us/census-race-ethnicity.html (noting that "[c]ommunity leaders have been advocating for a 'Middle Eastern or North African' category for years"); *infra* Part II.C.2. We also recognize that those who are recognized as "Native Hawaiian" may identify as "Kānaka ʻŌiwi ('native people' or 'people of the ancestral bone') or Kānaka Maoli (sometimes translated as 'real people' or 'Native Hawaiian') or as part of the Lāhui ('Nation')" and that the term Native Hawaiian may have negative connotations. *Frequently Asked Questions - Consultation*, U.S. DEPARTMENT OF THE INTERIOR https://www.doi.gov/hawaiian/frequently-asked-questions-consultation (last visited Oct. 14, 2023) [https://perma.cc/LQ8N-6C2T]; *see also* Megan Ulu-Lani Boyanton, *The Blood Quantum Controversy Through Hapa Hawai'i Eyes*, KA WAI OLA (Mar. 1, 2024) https://kawaiola.news/ea/the-blood-quantum-controversy-through-hapa-hawaii-eyes [https://perma.cc/6YW6-AC8W]. We use the descriptors employed by the census, without condoning them. For a general discussion of how "[t]he census has been a key tool of the racial state, allowing for the manipulation of categories of people deemed fit and unfit to be included in a nation long-imagined as White and as inevitably White-dominated," see LAURA E. GÓMEZ, INVENTING LATINOS: A NEW STORY OF AMERICAN RACISM 144 (2020).

The odds that a Black or Latina *woman* will argue before the Federal Circuit in a patent case are vanishingly small. According to the first-of-its-kind, hand-coded dataset of the gender and perceived race of thousands of attorneys we developed for this Article, women of color delivered only 125 arguments in Federal Circuit patent cases over the ten years from 2010 through 2019, accounting for barely 2% of the 6,392 arguments in our dataset. Only 28 of those 125 arguments were by Black women and 24 were by Latina women.[16] By contrast, white male attorneys presented 5,262 arguments, or 82.3% of the total. At the same time, of the twelve active judges presently on the Federal Circuit, five are women, four are persons of color (two judges are Latino, one is Asian, and one is Black), two of whom are women of color (one is Latina, another is Black).[17]

Patent law, in the not-too-distant past, was primarily the domain of specialist lawyers at boutique firms who had backgrounds in the hard sciences.[18] But no more.[19] Many boutique firms have been gobbled up by Big Law behemoths;[20] patent cases today, particularly on appeal, are litigated by the most prominent lawyers at the country's largest, most

[16] The remaining seventy-three arguments by women of color were by women we coded as Asian.

[17] *See Judge Biographies*, U.S. CT. APPEALS FOR THE FED. CIR., https://cafc.uscourts.gov/home/the-court/judges/judge-biographies (last visited Aug. 7, 2024) [https://perma.cc/5SKV-D4N2]. Wikipedia also provides background information on each judge. *See United States Court of Appeals for the Federal Circuit*, WIKIPEDIA, https://en.wikipedia.org/wiki/United_States_Court_of_Appeals_for_the_Federal_Circuit (last visited Nov. 3, 2024) [https://perma.cc/Q9NT-U5PE].

[18] *See* David L. Schwartz, *The Rise of Contingent Fee Representation in Patent Litigation*, 64 ALA. L. REV. 335, 351-56 (2012) ("Up until . . . the late 1980s . . . [p]atent law was practiced almost exclusively by specialty firms known as patent boutiques.").

[19] *See id.* at 354 ("By the turn of the millennium, most American Lawyer 200 general-practice firms handled patent litigation matters . . . . [T]hese firms often utilized trial lawyers who had been commercial litigators or antitrust litigators. Patent cases began to appear more like other civil cases: [t]hey were litigated by lawyers with trial experience. They were tried to juries instead of the bench. Large damages were possible.").

[20] For one of the first major acquisitions, see Jonathan D. Glater, *Pennie & Edmonds Says It Is Being Acquired by Jones Day*, N.Y. TIMES (Dec. 12, 2003) https://www.nytimes.com/2003/12/12/business/company-news-pennie-edmonds-says-it-is-being-acquired-by-jones-day.html, and for one of the most recent, see Zane Hill, *MoFo Merges With Durie Tangri*, L.A. BUS. J. (Feb. 20, 2023) https://labusinessjournal.com/law/mofo-merges-with-durie-tangri [https://perma.cc/Y9JB-4K3B].

prestigious law firms.[21] Patent law practice, in other words, has gone mainstream. It is a big dollar, high profile area on par with other fields: securities, antitrust, and so on, where the litigants are, in any given case, among the largest corporations in the world.[22]

By studying the practice of patent litigation, we can learn a lot about private law practice generally. In a prior Article, which was the first to broach the question of inequality in patent litigation, two of us documented the glaring absence of women lawyers before the Federal Circuit.[23] This Article builds on that work in three ways. First, it updates our existing dataset of thousands of Federal Circuit patent lawyers to include those lawyers' perceived race.[24] Second, this expanded dataset allows us to analyze questions of intersectionality: how race and gender *interact* to affect the roles lawyers play in the patent system.[25] And, third, we have coded the vast majority of Federal Circuit patent cases in our dataset for outcomes, which enables us to analyze whether particular cohorts of attorneys are more or less likely to win on appeal.[26]

The study we present contains several important insights. As already discussed, the bar arguing Federal Circuit patent appeals is overwhelmingly white (93% of all arguments) and overwhelmingly male (89% of all arguments). Yet, among the few lawyers of color who argue patent cases at the Federal Circuit, there are noticeably more women:

[21] *See* Ted Sichelman, *How Elite Lawyers Shape the Law*, JOTWELL (July 26, 2019), https://ip.jotwell.com/how-elite-lawyers-shape-the-law [https://perma.cc/6WPJ-MPAB].

[22] *See, e.g.*, ELAINE CHOW, LEX MACHINA, PATENT LITIGATION REPORT 2023, at 13 (Feb. 2023) (listing as the top five patent infringement defendants from 2020 through 2022: Samsung, Google, Apple, Microsoft, and Amazon).

[23] Paul R. Gugliuzza & Rachel Rebouché, *Gender Inequality in Patent Litigation*, 100 N.C. L. REV. 1683 (2022).

[24] See *infra* Part II.C for a fuller discussion of why perceived race is what, in our view, matters the purpose of our study about lawyers arguing patent appeals at the Federal Circuit.

[25] On intersectional analysis of the law and legal institutions, see generally, MEERA E. DEO, UNEQUAL PROFESSION: RACE AND GENDER IN LEGAL ACADEMIA 7 (2019); Devon W. Carbado & Cheryl I. Harris, *Intersectionality at 30: Mapping the Margins of Anti-Essentialism, Intersectionality, and Dominance Theory*, 132 HARV. L. REV. 2193 (2019); Kimberlé Crenshaw, *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color*, 43 STAN. L. REV. 1241 (1991).

[26] For a more detailed explanation of our case outcome dataset and coding, see *infra* Part II.B.

27% of arguments by lawyers of color were delivered by women, as compared to 11% of arguments by women among white lawyers. (As we explain in more detail below, over half of the arguments by lawyers of color in our dataset were by lawyers we coded as Asian; 16% were by lawyers we coded as Hispanic or Latino and 14% were by lawyers we coded as Black.[27])

One way to interpret our finding that the lawyers of color in our dataset are more likely to be women, as compared to women in the cohort of white lawyers, is that a lawyer who surmounts one barrier to professional success is more likely to surmount other barriers — an interesting corollary to the phenomenon of "prove it again" bias, or the idea that women and people of color, and especially women of color, must go "above and beyond" to get the same recognition as their colleagues.[28]

In addition, building on our prior work showing that government patent lawyers are five times more likely to be women than their private sector counterparts, we find in this Article that government patent lawyers are more than twice as likely to be persons of color than their private sector counterparts.[29]

Combining our gender and race data in an intersectional analysis reveals further disparities between the government and the private sector. Namely, our data indicate that an attorney arguing a Federal Circuit patent case for the government is over *ten times* more likely to be a woman of color than an attorney arguing for a private-sector litigant.[30] In fact, though the number of government arguments in our dataset (567) is less than one-tenth the number of arguments by private-sector lawyers (5,825), the government had a greater number of

[27] *See infra* Part III.A.

[28] AM. BAR ASS'N, COMM'N ON WOMEN IN THE PROFESSION, YOU CAN'T CHANGE WHAT YOU CAN'T SEE: INTERRUPTING RACIAL & GENDER BIAS IN THE LEGAL PROFESSION 7 (2018), https://www.americanbar.org/content/dam/aba/administrative/women/you-cant-change-what-you-cant-see-print.pdf [https://perma.cc/9PAS-SMR6] [hereinafter AM. BAR. ASS'N, INTERRUPTING BIAS].

[29] *See infra* Part III.B.2.

[30] Specifically, women of color account for 11.5% of the government arguments in our dataset but a mere 1.0% of private sector arguments. *See infra* Part III.B.3.

arguments presented by women of color (65) than the private sector (60).[31]

The proportion of government lawyers in our dataset who are women, people of color, or women of color exceed the proportion of lawyers (not just patent lawyers) who identify as women, people of color, or women of color in the U.S. population as a whole.[32] The private-sector lawyers in our dataset, by contrast, are more likely to be white and male than individuals in the overall population of lawyers.[33] Those findings, we think, cast doubt on the notion that inequality in patent practice is mainly due to a narrow "pipeline" of women, people of color, and women of color with scientific or technical backgrounds.[34] To the contrary, there are many women, people of color, and women of color arguing patent cases at the highest level — yet they are not getting opportunities to do so in law firm practice.

Why do we see the government cultivating equality and inclusion more successfully than the private sector? Perhaps it is because of the oft-discussed work-life flexibility that comes with government jobs.[35] But, in patent litigation, at least, we think the nature of the work and the culture of the workplace matter, too. In government practice, the lawyers who work hardest on a case are rewarded with the opportunity to argue that case, which leads to a more diverse population of arguing attorneys as compared with the private sector, where appellate oral

[31] *See infra* Part III.B.3.

[32] Specifically, as of 2020, 37% of practicing lawyers identified as women and 14% identified as persons of color. AM. BAR ASS'N, ABA PROFILE OF THE LEGAL PROFESSION 32-34 (2020), https://www.americanbar.org/content/dam/aba/administrative/news/2020/07/potlp2020.pdf [https://perma.cc/PUL8-FJBJ] [hereinafter PROFILE OF THE LEGAL PROFESSION]. In our study, 48% of patent case arguments were delivered on behalf of the government were by women and 15% were by lawyers who are persons of color. Women of color account for 8% of all practicing lawyers and 11.5% of patent case arguments in our dataset that were delivered on behalf of the government. *See also infra* Part IV.A.

[33] Overall, 86% of lawyers are white and 63% are male, compared to the private-sector patent lawyers in our dataset, who are 94% white and 91% male. *See* PROFILE OF THE LEGAL PROFESSION, *supra* note 32, at 32-34; *infra* Part III.B.

[34] See *supra* note 8 for an initial discussion of the supposed pipeline problem.

[35] *See, e.g.*, *Do You Have Good Work-Life Balance at Your Current (And/Or Former) Government Job?*, REDDIT https://www.reddit.com/r/usajobs/comments/whwrv0/do_you_have_good_worklife_balance_at_your_current (last visited Aug. 8, 2024).

arguments are often handled by the most senior attorneys, regardless of who worked hardest on the case beforehand.[36]

For all the disparities we document among lawyers arguing patent cases at the Federal Circuit, neither race nor gender nor the combination of the two correlate to case outcomes. Whether represented by a male lawyer or a female lawyer, a white lawyer or a lawyer of color, or any race and gender combination, appellants in Federal Circuit patent cases win about a quarter of the time and appellees win about three-quarters of the time.[37]

There is, however, one identifiable cohort of attorneys who win more frequently than all others: a small group of 65 private-sector lawyers (out of the over 2,500 in our dataset) who argue patent cases at the Federal Circuit more than anyone else.[38] When seeking to overturn a judgment of a federal district court, the Patent and Trademark Office, or the International Trade Commission in a patent case, those frequent Federal Circuit advocates succeed 41% of the time, as compared to a 24% win rate for the other private-sector lawyers in our dataset. That finding adds a patent-law angle to a growing literature documenting the remarkable influence a small group of specialist appellate litigators (mostly white and male, though not any more so than the appellate patent bar overall) have had on the U.S. legal system.[39]

In addition to providing a rich, descriptive analysis of the appellate patent bar and case outcomes, our study suggests steps that might increase diversity and equity in patent practice and the legal profession

[36] *See infra* Part III.A.

[37] *See infra* Part III.E.

[38] On average, at least once a year. *See infra* Part III.E.5.

[39] For summaries of how the elite *Supreme Court* bar has influenced the Court to be more attuned to business interests, see, for example, Richard J. Lazarus, *Advocacy Matters Before and Within the Supreme Court: Transforming the Court by Transforming the Bar*, 96 GEO. L.J. 1487, 1498 (2008); Katherine Shaw, *Friends of the Court: Evaluating the Supreme Court's Amicus Invitations*, 101 CORNELL L. REV. 1533, 1541 (2016); *see also* Allison Orr Larsen & Neal Devins, *The Amicus Machine*, 102 VA. L. REV. 1901, 1919 (2016) (chronicling the emergence of specialized Supreme Court practices in state governments, at nonprofits, and among law school clinics). For an interesting analysis of how elite, mostly white and male lawyers have had an outsized influence on legal writing *style*, see Alexa Z. Chew, *The Fraternity of Legal Style*, 20 L. COMMC'N & RHETORIC 39, 43 (2023).

more generally. Our finding that Federal Circuit case outcomes do not correlate with the race or gender of the arguing lawyer undercuts any stereotypes held by clients and senior law firm partners about who is more likely to succeed in arguing a case.[40]

Yet our data also raise difficult questions about what, exactly, we aim to accomplish when we pursue equal opportunity in law practice. Though our findings suggest that lawyers' gender and race have little connection to case outcomes, what seems to correlate with outcomes is having the resources to hire from the small cohort of the most experienced Federal Circuit lawyers in the country. Promoting racial and gender diversity without systemic change may not disrupt those power and resource inequalities.[41] And so we offer some thoughts about how lawyers' economic incentives and law firms' cultural norms might be altered to interrupt the bias we document in our study of appellate patent litigation.[42]

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[40] *Cf.* Joan C. Williams & Sky Mihaylo, *How the Best Bosses Interrupt Bias on Their Teams*, HARV. BUS. REV. (Nov.–Dec. 2019), https://hbr.org/2019/11/how-the-best-bosses-interrupt-bias-on-their-teams [https://perma.cc/XUG3-GULX] ("[I]f you have only a tight circle of people you trust to handle meaningful work, you're in trouble.").

[41] *See* Robin Ely & David A. Thomas, *Getting Serious About Diversity: Enough Already with the Business Case*, HARV. BUS. REV. (Nov.–Dec. 2020), https://hbr.org/2020/11/getting-serious-about-diversity-enough-already-with-the-business-case [https://perma.cc/RVH8-D92F] (arguing that "an 'add diversity and stir' approach" — meaning "[i]ncreasing the numbers of traditionally underrepresented people in [the] workforce" — "does not automatically produce benefits" in a "firm's effectiveness or financial performance"); *see also* DOROTHY A. BROWN, THE WHITENESS OF WEALTH: HOW THE TAX SYSTEM IMPOVERISHES BLACK AMERICANS AND HOW WE CAN FIX IT 202 (2021) (suggesting that the "black-white wealth gap" can be closed only through "intentional changes[] by policy makers motivated to take societal racism into account").

[42] For succinct summaries of steps recommended in the American Bar Association's landmark report on interrupting bias in the legal profession, *supra* note 28, see, for instance, Kim Elsesser, *Female Lawyers Face Widespread Gender Bias, According to New Study*, FORBES (Oct. 1, 2018, 3:34 PM EST), https://www.forbes.com/sites/kimelsesser/2018/10/01/female-lawyers-face-widespread-gender-bias-according-to-new-study [https://perma.cc/K7SB-FX24] (listing steps such as: better defining "culture fit" in the hiring process, instituting "office housework" interrupters, and starting mentoring programs); Karen Zraick, *Lawyers Say They Face Persistent Racial and Gender Bias at Work*, N.Y. TIMES (Sept. 6, 2018), https://www.nytimes.com/2018/09/06/us/lawyers-bias-racial-gender.html ("The report lays out methods and practices for organizations to counter bias, with an emphasis on using metrics to track and encourage fairness.").

The remainder of this Article proceeds as follows. Part I situates our project in the growing literature on race, gender, and intersectionality in patent law and practice. Part II describes the methodology of our empirical study. Part III presents our intersectional analysis of the race and gender of lawyers arguing patent appeals at the Federal Circuit. Part IV explores several implications of that analysis and leverages our data to address broader questions about how to achieve greater equity in the legal profession.

I. RACE, GENDER, INEQUALITY, AND THE LEGAL PROFESSION

We begin by foregrounding our study of race and gender in patent appeals with background on the demographics of patent lawyers, a review of prior scholarship on race, gender, and patent law, and a critical examination of race and gender intersectionality in the legal profession more broadly.

A. The Path to Patent Litigation

Today, more than half of law students are women[43] and a third are people of color.[44] Those numbers have been growing for several decades, so the proportions of practicing lawyers who are women or people of color are lower: 37% women, 14% people of color.[45] While women comprise over half of U.S. law students, they have not joined the ranks

[43] *See* Elizabeth Olson, *Women Make Up Majority of U.S. Law Students for First Time*, N.Y. TIMES: DEALBOOK (Dec. 16, 2016), https://www.nytimes.com/2016/12/16/business/dealbook/women-majority-of-us-law-students-first-time.html.

[44] AM. BAR ASS'N, PROFILE OF THE LEGAL PROFESSION 2022, https://cardozo.yu.edu/sites/default/files/2023-08/Professor%20Stein_Elements_EF_ABA.report.diversity.edited.pdf [https://perma.cc/454F-2Z4F]. A separate study pegs the percentage of law students who are Black women at just under 5%. KRYSTAL STUDAVENT RAMSEY, DEAN ALFREDA ROBINSON, SHARON BRIDGES, & DESIREÉ C. BOYKIN, THE STATE OF BLACK WOMEN IN THE LAW: 2023 DEIB ASSESSMENT REPORT 10, https://nationalbarinstitute.org/wp-content/uploads/digital_NBA_WLD_Report_Final_digital.pdf [https://perma.cc/47F7-FSHF]; *see also* NALP FOUND. L. CAREER RSCH. & EDUC. & CTR. FOR WOMEN IN L., WOMEN OF COLOR: A STUDY OF LAW SCHOOL EXPERIENCES 155 (2020) https://utexas.app.box.com/s/kvn7dezec99khii6ely9cve368q4gj90 [https://perma.cc/HUB3-TF3A] (19% of respondents to a large survey of law students identified as women of color).

[45] AM. BAR. ASS'N, PROFILE OF THE LEGAL PROFESSION, supra note 32, at 32-34.

of upper-tier law firms at the same pace.[46] The same is true for people of color, who represent less than 10% of law firm partners.[47] Finding data that combines gender and race information is difficult, but the best estimates are that only about 8% of lawyers at major law firms are women of color, that fewer than 3% are Black women,[48] and that fewer than 1% of all partners are Black or Latina women.[49]

When it comes to practicing patent law specifically, the gender and racial disparities are glaring. For instance, only 17.2% of registered patent attorneys (lawyers who are admitted to practice at the Patent and Trademark Office ("PTO")) are women.[50] Likewise, women account for only 10% of attorney appearances in post-issuance review proceedings at the PTO.[51]

[46] *See* Jacqueline Bell, *Law360's Glass Ceiling Report: What You Need to Know*, LAW360 (Sept. 13, 2021, 3:03 PM EST), https://www.law360.com/appellate/articles/1418221/law360-s-glass-ceiling-report-what-you-need-to-know [https://perma.cc/4MKU-S9B5].

[47] AM. BAR. ASS'N, PROFILE OF THE LEGAL PROFESSION, *supra* note 32, at 79.

[48] NAT'L ASS'N OF L. PLACEMENT, 2018 REPORT ON DIVERSITY IN U.S. LAW FIRMS 9 (2019), https://www.nalp.org/uploads/2018NALPReportonDiversityinUSLawFirms_FINAL.pdf [https://perma.cc/SF7C-CNQ8].

[49] RAMSEY ET AL., *supra* note 44, at 10.

[50] Saurabh Vishnubhakat, *Gender Diversity in the Patent Bar*, 14 J. MARSHALL REV. INTELL. PROP. L. 67, 80 (2014); *see also* Sean Tu, Paul R. Gugliuzza & Amy Semet, *Overqualified and Underrepresented: Gender Inequality in Pharmaceutical Patent Law*, 48 BYU L. REV. 137, 174-75 (2022) (finding that only 25% of lawyers who prosecuted a subset of important pharmaceutical patents were women).

[51] PTAB BAR ASS'N, WOMEN AT THE PTAB: POST-GRANT PROCEEDINGS 3 (2019), https://host8.viethwebhosting.com/~ptab/docs/PTAB-Bar-Association-2019-Report-on-Women-at-the-PTAB.pdf [https://perma.cc/U29L-F52D]. Some background: the PTO conducts both (i) patent examination proceedings — the process by which an applicant, usually with the help of a registered patent attorney, obtains a patent, and (ii) post-issuance review proceedings — processes through which anyone (usually someone accused of infringement) can ask the PTO to reconsider the validity of an issued patent. Those post-issuance proceedings, many of which were created by Congress less than a decade ago, *see* America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011), are now an important part of the patent litigation process, *see* Rochelle Cooper Dreyfuss, *Giving the Federal Circuit A Run for Its Money: Challenging Patents in the PTAB*, 91 NOTRE DAME L. REV. 235, 242-49 (2015). Below, we consider in more detail the surprising way in which post-issuance review has affected racial and gender representation among patent lawyers. *See infra* Part III.C.

In 2021, the American Intellectual Property Law Association reported that 78% of intellectual property attorneys were white.[52] Another study by Elaine Spector and LaTia Brand found that only 5% of attorneys registered to practice before the PTO identified as "racially diverse."[53] And only a small fraction of that 5% were *women* who identified as racially diverse.[54]

Racial and gender disparities in the patent system are often chalked up to a so-called pipeline problem: a dearth of women and people of color with the scientific and technical backgrounds thought necessary to work in the field.[55] But those notions are based on outmoded conceptions of what patent practice entails.[56] To be sure, a science or technical degree is a prerequisite to be admitted to practice at the PTO,[57] but that work represents a sliver of practice for many patent attorneys, especially patent litigators, particularly at the appellate level.[58]

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[52] ARLENE NEAL, AM. INTELL. PROP. L. ASS'N, REPORT OF THE ECONOMIC SURVEY 2021, at 7 (2021).

[53] ELAINE SPECTOR & LATIA BRAND, DIVERSITY IN PATENT LAW: A DATA ANALYSIS OF DIVERSITY IN THE PATENT PRACTICE BY TECHNOLOGY BACKGROUND AND REGION 4 (2020), https://www.uspto.gov/sites/default/files/documents/Landslide_Diversity_Article_September.pdf [https://perma.cc/TP7G-5KFE]. For non-attorneys admitted to practice before the PTO (so-called patent agents), 7% identified as racially diverse. *See id.* at 2.

[54] *See id.* at 4.

[55] *See* John Murph, *Minority in IP: Navigating a Lonely Road*, WASH. LAW., Mar.–Apr. 2022, at 26-27 (discussing the "glaring racial and gender disparities in STEM (science, technology, engineering, and mathematics) related to the professional fields"); SPECTOR & BRAND, *supra* note 53, at 13 ("[P]atent law requires a hard science degree. As such, the pipeline with respect to diverse candidates entering a STEM field needs to be addressed.").

[56] *See, e.g.*, Stacy Alexejun, *The Myth About Practicing IP*, MARQ. UNIV. L. SCH. FAC. BLOG (Nov. 28, 2017), https://law.marquette.edu/facultyblog/2017/11/the-myth-about-practicing-ip [https://perma.cc/7XH3-NBX2] ("The reason that you need attorneys like me to practice IP is because I am not the only one who is dumbfounded when presented with patent claims. There is a very good chance that your jury is not made up of engineers. There's an equally good chance that your judge is not an engineer.").

[57] *See* U.S. PAT. & TRADEMARK OFF., GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE 3 (2024), https://www.uspto.gov/sites/default/files/documents/OED_GRB.pdf [https://perma.cc/NW3C-WLYT].

[58] *See* JONATHAN S. MASUR & LISA LARRIMORE OUELLETTE, PATENT LAW: CASES, PROBLEMS, AND MATERIALS 22 (3d ed. 2023) ("It is now quite common for the largest and most profitable law firms to have substantial patent litigation departments. And there

Moreover, the notion that there is a dearth of women and people of color studying and working in science and technology is not supported by the evidence. In a 2023 study, the National Science Foundation reported that women and people of color each represented about 35% of the workforce in the science, technology, engineering, and mathematics ("STEM") fields.[59] Though some STEM workers do not have the educational background needed to immediately transition to law school and then to patent law practice,[60] in 2020, half of all bachelor's degrees in science and engineering went to women and 42% went to people of color.[61] Again, those proportions include degrees (such as degrees in the social and behavioral sciences) that may not provide a clear pathway to admission to practice at the Patent Office.[62] And there are discrete areas of science relevant to patent practice in which women and people of color are underrepresented, such as engineering and computer science.[63]

Our point is that there is a critical mass of women and people of color who have the educational backgrounds needed to practice patent law at a high level — to the extent scientific education is even necessary for

are many patent litigation jobs available to budding associates, whether or not they have technical degrees.").

[59] *See* NAT'L SCI. FOUND., NAT'L CTR. FOR SCI. & ENG'G STATS., DIVERSITY AND STEM: WOMEN, MINORITIES, AND PERSONS WITH DISABILITIES 6 (2023), https://ncses.nsf.gov/pubs/nsf23315/assets/report/nsf23315-report.pdf [https://perma.cc/47SY-NTC9].

[60] The NSF report, for instance, includes in the STEM workforce certain occupations that do not require a bachelor's degree. *See id.* at 68.

[61] *Id.* at 5-7. Women received 46% of master's and 41% of doctoral degrees in science and engineering; people of color received 40% of master's degrees and 30% of doctoral degrees in those fields. *Id.*

[62] On admission to practice at the PTO, see *supra* note 57.

[63] In 2020, women represented only about a quarter of degree recipients in engineering, NAT'L SCI. FOUND., *supra* note 59, at 46, and Black students received fewer than 5% of bachelor's degrees in that field, *id.* at 54. In computer science, women represented about a third of degree recipients, and Black students received fewer than 10% of bachelor's degrees. *Id.* at 47, 64. In the adjacent field of physics, Chanda Prescod-Weinstein, the first Black woman professor in the field of theoretical cosmology, recently wrote in a captivating memoir, "We are rare and precious, and part of our burden is we must craft our own sense of belonging because we are in spaces where no Black woman scientist has gone before." CHANDA PRESCOD-WEINSTEIN, THE DISORDERED COSMOS 132 (2021).

many roles in patent law practice.[64] Indeed, one of us has shown in previous work that women, though they are well represented in the educational fields relevant to pharmaceutical patent practice, such as chemistry and biology, remain underrepresented in both patent litigation and prosecution practice in the pharmaceutical area.[65] In short, the pipeline explanation for a lack of women and people of color doing patent law is, at best, incomplete.

Though there is evidence of inequality in the hiring, retention, and advancement of attorneys in patent law, very few studies explore the relationship between an attorney's identity and the outcomes of the client matters they handle. Plenty of studies suggest a general bias in courtroom settings. Women of color, for instance, are subject to compounding negative stereotypes and biases "more frequently than both white women and Black men."[66] Despite these biases, our data

[64] *See* Elise Baumgarten, Sumeet Dang & Andrew Trask, *Patent Litigation Is Not Just for Scientists*, BLOOMBERG L. (Apr. 26, 2021), https://news.bloomberglaw.com/ip-law/patent-litigation-is-not-just-for-scientists [https://perma.cc/UW88-5XBM] ("It should come as no surprise that attorneys without technical degrees have taken leading roles in some of the most important patent cases. For example, the U.S. Supreme Court's seminal case on the ability to patent human genes — *Association for Molecular Pathology v. Myriad Genetics Inc.* — was argued by Chris Hansen from the ACLU, Greg Castanias from Jones Day, and Donald Verrilli for the government. None have technical degrees, yet they were able to debate the science fluently with justices who were similarly new to the field.").

[65] *See* Tu et al., *supra* note 50, at 149.

[66] Alexis A. Robinson, *Effects of Race and Gender of Attorneys on Trial Outcomes*, AM. SOC. OF TRIAL CONSULTANTS (May 2011), https://www.thejuryexpert.com/2011/05/the-effects-of-race-and-gender-of-attorneys-on-trial-outcomes [https://perma.cc/P63F-DD8R]; *see also* David L. Cohen & John L. Peterson, *Bias in the Courtroom: Race and Sex Effects of Attorneys on Juror Verdicts*, 9 SOC. BEHAV. & PERSONALITY: AN INT'L J. 81, 81-87 (1981) (studying a mock jury of eleventh graders and finding that defendants represented by Black attorneys were more likely to be found guilty than if they were represented by a white attorney); Peter W. Hahn & Susan D. Clayton, *The Effects of Attorney Presentation Style, Attorney Gender, and Juror Gender on Juror Decisions*, 20 L. & HUMAN BEHAV. 533, 533 (1996) (showing that an attorney's aggressive presentation style had better outcomes for defendants); Stephanie Riger, Pennie G. Foster-Fishman, Julie Nelson-Kuna, & Barbara Currant, *Gender Bias in Courtroom Dynamics*, 19 L. & HUMAN BEHAV. 465, 465 (1995) (discussing gender as a predictor of bias in the Illinois court system). *But see* Justin D. Levinson & Danielle Young, *Implicit Gender Bias in the Legal Profession: An Empirical Study*, 18 DUKE J. GENDER L. & POL'Y 1, 1 (2010) (suggesting that,

show that, in appellate patent litigation, case outcomes do not correspond with identities.

B. The Prior Art: Race, Gender, and Patent Law

Among areas of high-level law practice, the absence of women, people of color, and particularly women of color in patent law, which we document in detail below, is not unique. Recent studies show racial and gender disparities in various fields, including mergers and acquisitions,[67] multi-district litigation,[68] tax law,[69] appeals in "high dollar" civil cases,[70] and in corporate business more generally.[71]

In patent law, the representation problem goes beyond who practices it. Intellectual property doctrines — mainly, the laws of patents, copyrights, and trademarks — are not usually mentioned in tandem with questions of racial and gender justice.[72] Yet inequality is a pervasive issue in intellectual property law.[73] Prior scholarship has made plain the

though implicit biases are pervasive, decisionmakers can overcome bias barriers to make gender neutral decisions).

[67] *See* Afra Afsharipour, *Women and M&A*, 12 UC IRVINE L. REV. 359, 359 (2022) (finding that only 10.5% of "lead legal advisors for buyers in large M&A deals" were women).

[68] David L. Noll & Adam S. Zimmerman, *Diversity and Complexity in MDL Leadership: A Status Report from Case Management Orders*, 101 TEX. L. REV. 1679, 1705 (2023) (finding that only 24% of lead counsel appointees in multi-district litigation were women).

[69] Alice G. Abreu & Richard K. Greenstein, *Rebranding Tax/Increasing Diversity*, 96 DENV. L. REV. 1, 26 (2018) (reporting that only 3% of members of the ABA tax section identified as members of a minority racial group).

[70] AMY J. ST. EVE & JAMIE B. LUGURI, HOW UNAPPEALING: AN EMPIRICAL ANALYSIS OF THE GENDER GAP AMONG APPELLATE ATTORNEYS 9 (2021), https://www.americanbar.org/content/dam/aba/administrative/women/how-unappealing-f_1.pdf [https://perma.cc/AP9Y-NR3J] (17% women).

[71] *See generally* NAOMI CAHN, JUNE CARBONE & NANCY LEVIT, FAIR SHAKE: WOMEN AND THE FIGHT TO BUILD A JUST ECONOMY (2024) (studying the persistence of gender disparities in the corporate workforce and that the highest educated women still fall behind their male peers).

[72] *Cf.* Matthew Sag, Tonja Jacobi & Maxim Sytch, *Ideology and Exceptionalism in Intellectual Property: An Empirical Study*, 97 CALIF. L. REV. 801, 803-04 (2009) (questioning assumptions about IP's apolitical nature).

[73] *See* ANJALI VATS, THE COLOR OF CREATORSHIP: INTELLECTUAL PROPERTY, RACE, AND THE MAKING OF AMERICANS 2 (2020) ("Racial inequality is a continuing and persistent problem in intellectual property law, not because of legal happenstance, economic

inequities inventors, creators, and attorneys face when they pursue intellectual property protection or work in the IP field.[74] Indeed, there is a growing body of research on diversity, equity, inclusion, and belonging in patent law; the study we present in this Article provides a quantitative account of exclusion consistent with baked-in biases in patent practice and doctrines.

Patented technology is created by inventors; patent rights are protected by lawyers.[75] Both roles — inventor and lawyer — are mainly populated by white men.[76] Holly Fechner and Matthew Shapanka, for instance, have demonstrated that "women, people of color, and lower-income individuals patent inventions at significantly lower rates than their male, white, and wealthier counterparts."[77] Michael Schuster, Evan Davis, Kourtenay Schley, and Julie Ravenscraft have similarly shown that female inventors and inventors of color "are significantly less likely to secure a patent relative to the balance of inventors" and that this disparity is independent of the quality or substance of the patent application.[78] Among university faculty, women and people of color are

motive, or racial accident but because copyright, patent, and trademark doctrines are fundamentally prefigured through raced conceptions of citizenship.").

[74] *See, e.g.*, Holly Fechner & Matthew S. Shapanka, *Closing Diversity Gaps in Innovation: Gender, Race, and Income Disparities in Patenting and Commercialization of Inventions*, 19 NAT. ACAD. INVENTORS 727, 727 (2018) (finding that women and people of color patent less than their male, white, and wealthier counterparts); Jessica C. Lai, *Patents and Gender: A Contextual Analysis*, 10 QUEEN MARY J. INTELL. PROP. 283, 285 (2020) (examining the "gendered patenting gap").

[75] Or, sometimes, patent agents — nonlawyers who are admitted to practice at the PTO. *See* U.S. PAT. & TRADEMARK OFF., *supra* note 57.

[76] Evidence of inequality in patenting activity dates back to the nineteenth century. *See* Deborah J. Merritt, *Hypatia in the Patent Office: Women Inventors and the Law, 1865–1900*, 35 AM. J. LEGAL HIST. 235, 290 (1991). There is also evidence that women who gained access to the patent system reaped economic benefits. *See* B. Zorina Khan, *Married Women's Property Laws and Female Commercial Activity: Evidence from United States Patent Records, 1790–1895*, 56 J. ECON. HIST. 356, 356 (1996).

[77] Fechner & Shapanka, *supra* note 74, at 727.

[78] W. Michael Schuster, R. Evan Davis, Kourtenay Schley & Julie Ravenscraft, *An Empirical Study of Patent Grant Rates as a Function of Race and Gender*, 57 AM. BUS. L.J. 281, 281 (2020). For further evidence of gender imbalance in patent acquisition, see Kyle Jensen, Balázs Kovács & Olav Sorenson, *Gender Differences in Obtaining and Maintaining Patent Rights*, 36 NATURE BIOTECH 307, 308 (2018).

underrepresented as inventors as compared to their white male counterparts, even when we look only at *tenured* professors.[79]

As argued at length by Anjali Vats in *The Color of Creatorship: Intellectual Property, Race, and the Making of Americans*, racializing and colonial doctrinal standards in intellectual property law fuel inequality and exclusion.[80] Jessica Lai has discussed how patent *law* is generally considered to be gender neutral but patenting *behavior* is gendered.[81] Gender-normative roles, biases, and power dynamics attributable to gender, Lai explains, can require individuals "to operate in masculine-coded arenas and manners in order to patent."[82] Kara Swanson's work, *Race and Selective Legal Memory: Reflections on Invention of a Slave*, details how racial barriers and implicit bias continue to shape law and society with implications for the patent system and citizenship debates.[83] Although laws explicitly preventing women and people of color from seeking or owning patents are no longer enforced, their existence has left a persistent scar on the intellectual property system that remains visible today.

When inventors seek legal representation to assist in protecting their creations, they are often met with an overwhelmingly white and male workforce. According to the 2020 study by Spector and Brand, "there are more patent attorneys and agents named 'Michael' in the United States than there are racially diverse women."[84] Evidence also indicates that women who practice patent prosecution are not equally credited as patent application writers as compared to their male counterparts, leading to career advancement discrepancies.[85]

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[79] Jordana R. Goodman, *Sy-STEM-ic Bias: An Exploration of Gender and Race Representation on University Patents*, 87 BROOK. L. REV. 853, 882-84 (2022).

[80] VATS, *supra* note 73, at 3.

[81] Lai, *supra* note 74, at 284.

[82] *Id.*; *accord* Miriam Marcowitz-Bitton, Yotam Kaplan & Emily Michiko Morris, *Unregistered Patents & Gender Equality*, 43 HARV. J. L. & GENDER 47, 58 (2020) (exploring questions of implicit gender bias in patent doctrine).

[83] Kara W. Swanson, *Race and Selective Legal Memory: Reflections on Invention of a Slave*, 120 COLUM. L. REV. 1077, 1111 (2020).

[84] SPECTOR & BRAND, *supra* note 53.

[85] Jordana R. Goodman, *Ms. Attribution: How Authorship Credit Contributes to the Gender Gap*, 25 YALE J.L. & TECH. 309, 310 (2023).

Many organizations have begun programs to address the lack of diversity in the patenting process and in patent-related legal work. As one example, the PTO is collaborating with Santa Clara Law School's High Tech Law Institute to study in-house intellectual property legal departments and their practices.[86] PTO Director Kathi Vidal has proposed to update scientific and technical requirements for patent practitioners in the hopes of increasing diverse representation.[87] Likewise, the American Bar Association has suggested increasing education about legal careers (including careers in intellectual property law) to diverse students, making legal career opportunities available to them, and implementing programs to help support students in their early legal career.[88] Still other programs incentivize law firms to hire diverse attorneys or penalize firms if their employees are not diverse.[89]

Our quantitative study of appellate patent litigation highlights just how far we have to go to bring more women, people of color, and women of color into patent law practice. Before presenting our results, however, the next section situates our research within scholarship that traces systemic exclusion in the legal profession writ large. It also discusses the importance of studying intersecting identities in the legal field.

C. Intersectionality, Diversity, and the Legal Profession

In a recent study of inequality in innovation, Ethel Mickey and Laurel Smith-Doerr wrote that "[a]n intersectional lens allows a more accurate view of gendered innovation by acknowledging the interlocking systems

[86] *Diversity in Innovation: Best Practices*, U.S. PAT. & TRADEMARK OFF. (Dec. 7, 2021), https://www.uspto.gov/about-us/events/diversity-innovation-best-practices [https://perma.cc/7HXL-7UWY].

[87] Riddhi Setty, *Vidal Pushes for Design Patent Bar, More Diversity at IP Agency*, BLOOMBERG L. (Oct. 17, 2022), https://news.bloomberglaw.com/ip-law/vidal-pushes-for-design-patent-bar-more-diversity-at-ip-agency [https://perma.cc/Z6GM-S9TP].

[88] John Harrity & Samantha Sullivan, *How to Improve Diversity in the Legal Profession*, AM. BAR ASS'N (July 18, 2022), https://www.americanbar.org/groups/law_practice/publications/law_practice_magazine/2022/july-august/how-to-improve-diversity-in-the-legal-profession [https://perma.cc/UT65-TY75].

[89] Elaine Spector, *Ensuring Women and Diverse Candidates in the Patent Bar: We Must Address the Root of the Problem*, IPWATCHDOG (Mar. 15, 2021 7:15 AM), https://ipwatchdog.com/2021/03/15/ensuring-women-diverse-candidates-patent-bar-must-address-root-problem/id=130896 [https://perma.cc/LR75-FWWX].

of racial and gender oppression."[90] Our Article responds to the call for more nuanced methodologies to generate intersectional data.[91] An intersectional analysis of race and gender is essential to understanding the overlapping, inseparable systems of oppression underlying inequalities in the practice of patent law.[92] Intersectionality resists categorizing people based on only one characteristic, which can erase how race, gender, and other identities inform each other as well as external perceptions.[93] Said another way, intersectional analysis

[90] Ethel L. Mickey & Laurel Smith-Doerr, *Gender and Innovation Through an Intersectional Lens: Re-Imagining Academic Entrepreneurship in the United States*, 16 SOCIO. COMPASS 1, 3 (2022).

[91] *See, e.g.*, Brittany Arsiniega, *Beyond Big Law: Toward a More Inclusive Study of Gender in the Legal Profession*, 27 UCLA WOMEN'S L.J. 113, 114 (2020) (calling for additional research on lawyers with intersectional identities to increase the understanding of gender inequality and the intersection of gender and class); Peter Blanck, Fitore Hyseni & Fatma Altunkol Wise, *Diversity and Inclusion in the American Legal Profession: Discrimination and Bias Reported by Lawyers with Disabilities and Lawyers who Identify as LGBTQ+*, 47 AM. J.L. & MED. 9, 10 (2021) (calling for further research on individuals with intersectional identities including disability and sexual orientation, along with gender, race/ethnicity, and age); Frank Fernandez, Hyun Kyong Ro & Miranda Wilson, *The Color of Law School: Examining Gender and Race Intersectionality in Law School Admissions*, 128 AM. J. EDUC. 455, 456 (2022) (noting that studies on law school admissions have not considered intersectionality, tending to consider gender and race separately).

[92] Professor Kimberlé Crenshaw's use of the term "intersectionality" described how feminist theory and antiracist discourse failed to account for the specific discrimination faced by Black women as people with multiple identities. Kimberlé Crenshaw, *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*, 1989 U. CHI. LEGAL F. 139, 140-41 (1989).

[93] *See, e.g.*, Todd A. Collins, Tao L. Dumas & Laura P. Moyer, *Intersecting Disadvantages: Race, Gender, and Age Discrimination Among Attorneys*, 98 SOC. SCI. Q. 1642, 1643 (2017) (study of 3,590 lawyers across the United States, finding that Black women experience racism in ways distinct from Black men and sexism differently than white women); Mark Paul, Khaing Zaw, Darrick Hamilton &William Darity Jr., *Returns in the Labor Market: A Nuanced View of Penalties at the Intersection of Race and Gender*, 28 FEMINIST ECON. 1, 3-5 (2022) ("[T]he penalties associated with the combination of two or more socially marginalized identities interact in multiplicative or quantitatively nuanced ways."); *see also* Jamillah Bowman Williams, *Beyond Sex-Plus: Acknowledging Black Women in Employment Law and Policy*, GEO. EMP. RTS. & EMP. POL'Y J. 1, 31 (2021) [hereinafter Williams, *Beyond Sex-Plus*] ("Intersectional discrimination and harassment are not one size fits all, and rigid analytical frameworks that rely on discrete characteristics and narrow tests do not work.").

recognizes the shortcomings of deploying the "single-axis categorizations of identity" that Kimberlé Crenshaw criticized over thirty years ago.[94]

In the study presented below, we have combined our race and gender data to gain a clearer picture of the nature of inequality in patent law practice. Those disparities are so pronounced, and the data is so limited, that quantitative analysis is sometimes possible only through a single-axis lens; the small proportion of women of color in patent law practice, for instance, can make detailed statistical analysis not feasible.[95] We thus focus on race *or* gender in parts of our quantitative study, while also combining race *and* gender when possible.[96] We break new ground with this study by examining both the race and gender of patent attorneys, and our aim is to offer this study as a case study of why intersectionality, or, more pointedly, its absence, matters in the legal profession.[97]

Many scholars have examined the racist and sexist foundations of the legal profession — a profession (patent practice included) based on exclusion, not inclusion.[98] In considering remedies, much of the literature begins from the premise that diverse workplaces help address longstanding discrimination and professional exclusion.[99] Yet realizing diversity in the legal profession, especially at the appellate patent bar, has been elusive; the legal profession remains one of the least diverse professions in the United States.[100]

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[94] Crenshaw, *supra* note 92, at 140.

[95] *See infra* note 195.

[96] *See infra* Part III.

[97] *See Diversity in Law: Who Cares?*, AM. BAR ASS'N (Apr. 30, 2016), https://www.americanbar.org/groups/litigation/committees/diversity-inclusion/articles/2016/spring2016-0416-diversity-in-law-who-cares [https://perma.cc/4JVM-A5KC]; *see generally* INST. FOR INCLUSION IN THE LEGAL PRO., THE STATE OF DIVERSITY AND INCLUSIVITY IN THE LEGAL PROFESSION (2020) (providing a literature review).

[98] The American Bar Association has been a vocal proponent of the need to address past discrimination, given that the ABA (like many local bar associations) excluded Black lawyers at its founding. Davis G. Yee, *Promoting Diversity as Professionalism*, 73 S.C. L. REV. 885, 914 (2022).

[99] *Diversity in Law: Who Cares?*, *supra* note 97.

[100] *See* DESTINY PEERY, PAULETTE BROWN & EILEEN LETTS, ABA COMMISSION ON WOMEN IN THE LEGAL PROFESSION, LEFT OUT AND LEFT BEHIND: THE HURDLES, HASSLES, AND HEARTACHES OF ACHIEVING LONG-TERM LEGAL CAREERS FOR WOMEN OF COLOR x (2020) (noting that increased efforts by the legal profession to enhance recruitment and

Law firms and corporations have broadcast a desire to be more diverse and inclusive by creating affinity groups, mentoring programs, and actively recruiting and seeking to retain women and attorneys of color.[101] These employers often make a business case for diversity, which has caused considerable debate.[102] The business case frames diversity as economically advantageous for corporations and law firms.[103] Diverse attorneys are perceived to help firms acquire clients with different experiences and from different cultures, producing better work product and stronger client relationships while allowing firms to be more flexible in their offerings and services, all of which boosts financial results.[104] Increased diversity also has been linked to "higher-quality

retention of women and diverse attorneys has benefited white women the most, "with little to no progress being made with respect to attorneys of color, including women of color"); DEBORAH L. RHODE, THE TROUBLE WITH LAWYERS 60 (2015) ("In principle, the bar is deeply committed to equal opportunity and social justice. In practice, it lags behind other occupations in leveling the playing field.").

[101] Yee, *supra* note 98, at 893, 895, 909, 914-15.

[102] Oriane Georgeac & Aneeta Rattan, *Stop Making the Business Case for Diversity*, HARV. BUS. REV. (June 15, 2022), https://hbr.org/2022/06/stop-making-the-business-case-for-diversity [https://perma.cc/5AXQ-ZGXY]. Davis Yee offers an alternative rationale for diversity in law practice: legal professionalism. Yee argues that the American Bar Association's rules of professional conduct promote diversity and thus a lawyer's professional responsibility and identity depend on a commitment to diversity and inclusion. Yee, *supra* note 98, at 915-16.

[103] *See* Merida L. Johns, *Cultural, and Organizational Barriers Preventing Women from Achieving Senior and Executive Positions*, 10 PERSPS. HEALTH INFO. MGMT 1, 26 (2013) ("The business case for gender diversity in senior and executive positions is compelling. Studies show that companies that have the best records for promoting women outstrip their competition on every measure of profitability."). *But cf.* Robin J. Ely & David A. Thomas, *Getting Serious About Diversity: Enough Already with the Business Case*, HARV. BUS. REV. (Nov.–Dec. 2020), https://hbr.org/2020/11/getting-serious-about-diversity-enough-already-with-the-business-case [https://perma.cc/SH38-QY8V] ("Increasing the numbers of traditionally underrepresented people in your workforce does not *automatically* produce benefits . . . [B]usiness leaders must reject the notion that maximizing shareholder returns is paramount; instead they must embrace a broader vision of success that encompasses learning, innovation, creativity, flexibility, equity, and human dignity.").

[104] *See* Anna Powers, *A Study Finds That Diverse Companies Produce 19% More Revenue*, FORBES (June 27, 2018 10:15 PM), https://www.forbes.com/sites/annapowers/2018/06/27/a-study-finds-that-diverse-companies-produce-19-more-revenue/?sh=6e689b3e506f [https://perma.cc/J2UB-8HEL].

work, better decision-making, greater team satisfaction, and more equality,"[105] which can aid employee retention efforts. And some clients demand greater diversity among the law firm lawyers working for them, adding another reason for firms and other entities to embrace the diversity of their workforce.[106]

In addition to financial incentives, there are reputational stakes that correlate with diversity. Most appellate patent practices are housed at large, multinational law firms that have strong interests in their national and international reputations. The business case for diversity is a practical and important one for them: pursuing a diverse workforce helps them retain women lawyers and lawyers of color, which assists in recruitment and building a brand that embraces diversity and inclusion. Corporations and law firms publicize programs and initiatives that seek to support diverse lawyers and ensure their contributions are realized and appreciated.[107]

As we explore in greater detail in the final part of this Article, it is not clear that efforts firms and corporations have undertaken in service of diversity and inclusion have made enduring changes at the highest levels of law practice.[108] That is in part because justifications for diversity can elide critical analysis of why the profession continues to exclude people.[109] The business case for diversity asserts that inequalities can be

[105] *Id.*

[106] *See* AM. BAR ASS'N, *supra* note 9, at 117 ("Clients are demonstrating a willingness to send business to firms that meet their diversity goals and to take business away from firms which do not.").

[107] Powers, *supra* note 104.

[108] *See infra* Part IV. For a more general critique of large law firms' diversity efforts, see Eli Wald, *BigLaw Identity Capital: Pink and Blue, Black and White*, 83 FORDHAM L. REV. 2509, 2518-19 (2015).

[109] Scholarship analyzing the need for reparations as a response to structural racism is instructive. *E.g.*, MEHRSA BARADARAN, THE COLOR OF MONEY: BLACK BANKS AND THE RACIAL WEALTH GAP 281 (2017) ("Full justice demands a recognition of the historic breach of the social contract between America's constitutional democracy and [B]lack Americans. And contract breach requires a remedy."); *accord* Pamela D. Bridgewater, *Ain't I a Slave: Slavery, Reproductive Abuse, and Reparations*, 14 UCLA WOMEN'S L.J. 89, 91-93 (2005); Roy L. Brooks, *Racial Reconciliation Through Black Reparations*, 63 HOWARD L.J. 349, 353-54 (2020); A. Mechele Dickerson, *Designing Slavery Reparations: Lessons from Complex Litigation*, 98 TEX. L. REV. 1255 (2020); James R. Hackney, Jr., *Ideological Conflict, African American Reparations, Tort Causation, and the Case for Social Welfare*

addressed primarily by adding more people of color or women to the employment or client pool. It fails to address any underlying cultural, social, and financial impediments to advancement and inclusion in the first place. Indeed, the business case depends on maintaining a status quo of profit maximation as the central objective of private law practice, which will inevitably shape who succeeds and who fails. If adding women or people of color does not advance a business's bottom line in a relatively short timeframe, the business case for inclusion presents no strong incentive to explore creating more equitable and intersectional work or client environments.

In patent litigation, the roles of equity and intersectionality largely have been overlooked for too long.[110] This study shines a light on the field's problems of representation to suggest that patent practice is not immune from critique and to consider deeper, systemic problems common to many areas of law.

II. METHODOLOGY

This part of the Article describes the methodology of our study, including the novel hand-collected and hand-coded[111] dataset we built to explore questions of race and gender representation in appellate patent practice.

Transformation, 84 B.U. L. REV. 1193, 1202-06 (2004); Kaimipono David Wenger, *"Too Big to Remedy?": Rethinking Mass Restitution for Slavery and Jim Crow*, 44 LOY. L.A. L. REV. 177, 184-87 (2010).

[110] *Cf.* Alice Abreu, *Why Is Tax So White?*, TAXNOTES (Aug. 30, 2021), https://www.taxnotes.com/featured-analysis/tax-fairness-search-justice-and-representation/2021/08/27/777hn [https://perma.cc/N6RQ-8TNY] ("[A] field of law that fails to recognize that it reflects values will not only fail to recognize that it implicates good values, like social justice, but it will remain blind to the way it reflects bad values, like racism, misogyny, and homophobia.").

[111] Automating any part of the building, coding, or analysis of our dataset of thousands of patent lawyers was impossible. The manual labor required to build or dataset both highlights the difficulty of studying questions of race and gender in litigation and underscores the importance of both the methodology we developed and the dataset we created.

A. Dataset

To build our dataset, we began with a compilation of all Federal Circuit decisions in patent cases from 2010 through 2019. Our starting source was *The Compendium of Federal Circuit Decisions*,[112] developed by Professor Jason Rantanen,[113] which we used to generate a comprehensive list of Federal Circuit rulings in appeals from the federal district courts and the PTO.[114] From that initial list, we manually eliminated trademark cases[115] and added appeals in patent cases from the International Trade Commission ("ITC").[116]

We then used that list of Federal Circuit patent decisions to create a dataset of all cases in which the court conducted oral argument, along with information about the attorneys who argued each case.[117] In the

[112] *The Compendium of Federal Circuit Decisions*, FED. CIR. DATA PROJECT, UNIV. OF IOWA, https://empirical.law.uiowa.edu/compendium-federal-circuit-decisions [https://perma.cc/PZ5V-HZDT].

[113] For a description of the *Compendium* and its contents, see Jason Rantanen, *The Landscape of Modern Patent Appeals*, 67 AM. U. L. REV. 985, 997-1007 (2018).

[114] We included in our dataset summary affirmances (that is, affirmances issued without any opinion) under Federal Circuit Rule 36. For an explanation of the different types of opinions and orders the Federal Circuit uses to dispose of appeal, and of the importance of including Rule 36 affirmances in empirical studies of Federal Circuit litigation, see Paul R. Gugliuzza & Mark A. Lemley, *Can a Court Change the Law by Saying Nothing?*, 71 VAND. L. REV. 765, 778-80 (2018).

[115] We searched for cases in which the tribunal below was the PTO's *Trademark* Trial and Appeal Board.

[116] We searched the opinions and orders on the Federal Circuit's website for appeals from the ITC and reviewed the decisions to see if they involved patent issues. For a primer on the ITC's power to decide issues of patent infringement and validity and to issue orders barring the importation of infringing products, see Sapna Kumar, *Expert Court, Expert Agency*, 44 U.C. DAVIS L. REV. 1547, 1553-62 (2011).

[117] Specifically, we used the slip opinions (and summary affirmances) on the Federal Circuit's website to collect data about the identity and organizational affiliation of the lawyers who presented oral argument in each case. Cases that were argued include a notation along the lines of "[Lawyer], [Firm], [City, State], *argued for* [Party]." *See, e.g.*, Haemonetics Corp. v. Baxter Healthcare Corp., No. 2009–1557, slip op. at 1 (Fed. Cir. June 2, 2010) (emphasis added). Cases that were not argued and were submitted on the briefs say merely "[Lawyer], [Firm], [City, State], *for* [Party]." *See, e.g.*, Wallace v. Ideavillage Prods. Corp., No. 2015–1077, slip op. at 1 (Fed. Cir. Mar. 3, 2016) (emphasis added).

end, that dataset contained 3,059 cases and a total of 6,559 individual oral arguments.[118]

It bears emphasizing that our dataset includes all of the relevant Federal Circuit cases decided during the time period of our study, whether the case was decided through a precedential opinion, nonprecedential opinion, or without any opinion at all. So, unlike many empirical studies of litigation at the federal courts of appeals, our study is unaffected by race or gender biases that may exist in subpopulations of reported federal appellate decisions[119] or by the reality that many federal appellate decisions are not available in any easily accessible database.[120]

[118] Note that the number of total arguments is more than two times greater than the number of cases in which oral argument was held because it is not unusual for more than two lawyers to present argument in a single case. *See, e.g.*, Evolved Wireless LLC v. ZTE (USA) Inc., 778 F. App'x 967, 967 (Fed. Cir. 2019) (four lawyers argued: one for the appellant, two for the appellees, and one for an intervenor). It also sometimes happens that only one side presents argument. *See, e.g.*, Akazawa v. Link New Tech, Inc., 397 F. App'x 661 (Fed. Cir. 2010).

In calculating the number of arguments presented by any given lawyer, our unit of measurement was one Federal Circuit decision. For example, if the Federal Circuit consolidated several appeals and issued one opinion resolving all of those appeals, the attorneys were credited with having presented one argument. Conversely, if the court decided two or more related cases in separate opinions, the attorneys were credited with having presented multiple arguments, even if those arguments were heard by the same panel on the same day.

One might suggest that the monthly and daily argument schedules posted on the Federal Circuit's website, Scheduled Cases, U.S. CT. OF APPEALS FOR THE FED. CIR., http://www.cafc.uscourts.gov/scheduled-cases (last visited Aug. 27, 2024) [https://perma.cc/2Q3U-8GJK], would provide a more straightforward way to calculate the number of oral arguments. But the court removes those schedules from its website after each session, and the clerk's office told us it does not maintain an archive of them. Email from Jarrett B. Perlow, Chief Deputy Clerk, U.S. Ct. of Appeals for the Fed. Cir., to Paul R. Gugliuzza, Prof. of L., Temp. Univ. Beasley Sch. of L. (May 24, 2021) (on file with authors).

[119] *See* Nina Varsava, Keith Carlson, Michael A. Livermore & Daniel N. Rockmore, *Judicial Dark Matter*, 91 U. CHI. L. REV. 1949, 1993-95 (2024).

[120] *See* Merritt E. McAlister, *Missing Decisions*, 169 U. PA. L. REV. 1101, 1101 (2021).

B. Outcome Coding

We will describe below how we coded the lawyers in our oral argument dataset for race and gender. But we also included in our dataset information about how cases were decided so we could examine win rates for lawyers with different demographic characteristics. Fortunately, *The Compendium of Federal Circuit Decisions* contains information about the Federal Circuit's disposition of every case (affirmed, reversed, vacated, dismissed, etc.).

In coding case outcomes, we distinguished between lawyers arguing on behalf of appellants and lawyers arguing on behalf of appellees because the Federal Circuit affirms in full in roughly three-quarters of the patent cases it decides.[121] That is, an appellee is about three times more likely to win a Federal Circuit case than an appellant. Our coding treated anything but a full affirmance as a victory for the appellant and a loss for the appellee. Conversely, we treated full affirmances as victories for appellees and losses for appellants.[122] Overall, appellants won 27.0% of the cases in our dataset and appellees won 73.9%.[123]

In calculating win rates, we ignored oral arguments that were presented by any party who was not an appellant or appellee, such as an intervenor or amicus. We also ignored cross-appeals and cases with nonmerits dispositions, such as dismissals. The reason for those exclusions was practical: a result such as 'affirmed' or 'reversed' does not tell you who won the case when both parties appeal,[124] nor does it tell you whether an intervenor won or lost or whether the court adopted or rejected the arguments made by amici. And nonmerits dispositions could occur for a host of reasons and at the behest of either party (or both, such as in the case of a settlement).

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[121] *See* Jason Rantanen, *Federal Circuit Dataset & Stats: January 2023 Update*, PATENTLYO (Jan. 31, 2023), https://patentlyo.com/patent/2023/01/federal-circuit-dataset.html [https://perma.cc/3GBZ-TKGQ].

[122] *See* Jason Rantanen, Charles Neff, Eweosa Owenaze & Allison Williamson, *Who Appeals (and Wins) Patent Infringement Cases?*, 60 HOUS. L. REV. 289, 326 (2022) (also using this coding methodology and discussing potential shortcomings).

[123] The figures do not add up to 100% because, as noted, some cases involve unequal numbers of attorneys arguing on the respective sides. *See supra* note 118.

[124] *See* Rantanen et al., *supra* note 122, at 317 (taking a similar approach).

The number of decisions in our dataset that we did not code for outcome on those grounds was small: 354 cases involved cross-appeals (11.6% of all cases in our dataset)[125] and another 43 (1.4%) were resolved on nonmerits grounds.[126] And oral arguments on behalf of intervenors or amici comprised barely 200 of the over 6,500 individual arguments in our dataset, or less than 4% of the 5,371 arguments we were able to code for outcome.

We are not sure whether the exclusion of cross-appeals, amici, and nonmerits dispositions affects our results in any meaningful way. In excluding intervenors, we disproportionately excluded government attorneys from our outcome results. (Today, the most common intervenor in Federal Circuit patent appeals is the PTO, intervening to defend its decision in post-issuance review.[127]) Thus, while government attorneys were disproportionately successful in the cases we were able to code for outcome,[128] our analysis likely understates the government's true advantage in patent appeals at the Federal Circuit because we do not count the government's wins as an intervenor.[129]

C. Coding for Gender and Perceived Race

This section describes how we coded our data for the gender and perceived race of the lawyers who presented oral argument at the Federal Circuit and how we analyzed the intersection of race and gender in that data.

[125] Many of the cross-appeals were coded as involving "cross-appellants" in the *Compendium*; we identified a small number of additional cross-appeals by manually reviewing the case captions on the Federal Circuit's slip opinions.

[126] To identify nonmerits resolutions, we reviewed the *Compendium*'s outcome coding for "dismissed" or anything similar.

[127] On PTO appellate intervention, see generally Saurabh Vishnubhakat, *When Can the Patent Office Intervene in Its Own Cases?*, 73 N.Y.U. ANN. SURV. AM. L. 201, 241 (2018).

[128] *See infra* Part III.E.3.

[129] That said, the number of arguments excluded from our outcome coding on the ground that the argument was presented by an intervenor represents, at most, only a third of the 600-plus government arguments in our dataset.

1. Gender

Once we had a list of all individual lawyers who argued Federal Circuit patent appeals from 2010 through 2019 (and how many times they did so), we coded each lawyer for gender. We have described that process in detail elsewhere.[130] In brief, we started with a gender name dictionary that the World Intellectual Property Organization ("WIPO") developed to analyze inventor gender in international patent applications.[131] That dictionary contains 6.2 million names drawn from 182 countries — more than adequate for a project, like ours, that involves lawyers with names that mostly have clear gender connotations to a U.S. reader.[132]

If the dictionary identified a name as ambiguous in its gender connotation or if we, during our line-by-line review of the dataset, had any doubts about the dictionary's gender coding, we researched the individual lawyer in question. Because most of the lawyers in our dataset are still alive and actively practicing, we were often able to find a biographic webpage on which the lawyer identified a gender, usually through the use of gendered pronouns.[133]

In all, our dataset contains 6,559 Federal Circuit patent case oral arguments coded for the gender of the arguing lawyer and 2,768 individual lawyers coded for gender.

One final note about our gender coding: we coded each lawyer in our dataset as either male or female — a binary approach that does not account for the myriad ways gender identity manifests.[134] We

[130] Gugliuzza & Rebouché, *supra* note 23, at 1698-1700.

[131] Gema Lax Martinez, Julio Raffo & Kaori Saito, *Identifying the Gender of PCT Inventors* (WORLD INTELL. PROP. ORG., Economic Research Working Paper No. 33, 2016), https://www.wipo.int/edocs/pubdocs/en/wipo_pub_econstat_wp_33.pdf [https://perma.cc/SC6A-E48T].

[132] For that reason, we used the WIPO dictionary's indication of the gender connotation of a particular name *in the United States* to code the lawyers in our dataset. *Id.*

[133] Manually researching biographical materials is a common technique in the literature on gender and patents. *See, e.g.*, Kjersten Bunker Whittington & Laurel Smith-Doerr, *Women Inventors in Context: Disparities in Patenting across Academia and Industry*, 22 GENDER & SOC'Y 194, 201-02 (2008).

[134] For scholarship imagining a legal system that resists binary language, see Ari Ezra Waldman, *Gender Data in the Automated Administrative State*, 123 COLUM. L. REV. 2249, 2253 (2023) ("[L]aw has mandated, influenced, and guided the state to automate in a way that binarizes gender data, thereby erasing and harming transgender, nonbinary,

underscore, however, that we frequently determined gender identity by consulting biographical materials prepared by the lawyers themselves. The absence of lawyers in our dataset using nonbinary pronouns is itself worthy of note and perhaps further study.[135]

2. Perceived Race

To complete our coding for perceived race, we began with our dataset of 2,768 individual lawyers (already coded for gender) and set out to find photographs and biographical information about each of them. Between the three authors and a team of six research assistants, we found photographs of all but eighty-eight lawyers in our dataset.

We then worked to identify the races of the people depicted in those photographs. We also developed a sample of 100 additional lawyer photographs, which we will describe shortly, to use as a reliability check on our coding methodology.

We created a survey for coders to use in identifying the race of the lawyers depicted in the photographs we found, using the following prompt:

> For each question, please identify the ethnicity/race(s) (American Indian or Alaska Native, Asian, Black or African American, Hispanic/Latino, Native Hawaiian or Other Pacific Islander, or White) that you believe corresponds to the photographed individual. For definitions of each demographic category, please see https://nces.ed.gov/ipeds/report-your-data/race-ethnicity-definitions. You should try to choose the race or ethnicity that BEST describes the person in question.

and gender-nonconforming individuals."); Jessica C. Lai & Janine L. Williams, *Trade Marks and Gender: Instrumentalising the Law for Non-Binary/Genderqueer Marketing?*, *in* A RESEARCH AGENDA FOR INTELLECTUAL PROPERTY LAW AND GENDER (Jessica C. Lai & Kathy Bowrey eds., 2024) (forthcoming 2024) (manuscript at 3) (on file with the authors) ("[G]ender is often portrayed as static and as a binary . . . . Yet, . . . in the 21st century, it is becoming increasingly recognised in the Western world that one need not identify either as a woman or a man, but can identify as non-binary or genderqueer.").

[135] *Cf.* Ellen Ellie Krug, *We Hear You Knocking: An Essay on Welcoming "Trans" Lawyers*, 41 WM. MITCHELL L. REV. 181, 196 (2015) (suggesting "how to create a positive, welcoming environment for an attorney . . . who identifies as transgender or variant somewhere on the gender spectrum").

> Approximately 3% of all law school graduates are categorized as having "two or more races," so please select more than one option sparingly.

To be clear, race and ethnicity are complicated, sometimes artificial, identifiers. Birth locations, separated by mere miles, can mean the difference between a person identifying — or being perceived — as a particular race or ethnicity.[136] We explain our choice to use perceived race below; here, we discuss our use of U.S. census categories.[137] The U.S. census collects data on race in accordance with guidance provided by the U.S. Office of Management and Budget based on self-identification.[138] In our survey, we used the categories currently used by the census to distinguish ethnic and racial groups in the United States: Hispanic or Latino, American Indian or Alaskan Native, Asian, Black or African American, White, and Native Hawaiian or Other Pacific Islander.[139] We also referred coders to the government-provided definitions for each race and ethnicity.[140]

We deviate from the census identification practice in one area. In the census, participants are first asked to designate their ethnicity as (i) Hispanic or Latino or (ii) Not Hispanic or Latino, followed by a second question about identifying race among the remaining five categories. We chose to combine those two questions — which the

[136] For a discussion of how the racial categories on the census (which we adopted for our study) can be both "disciplinary" (as a form of "surveillance, normalization, and examination") and "aspirational" (in that they have been used "by groups seeking recognition of a group identity and inclusion in the national community"), see Naomi Mezey, *Erasure and Recognition: The Census, Race and the National Imagination*, 97 NW. U. L. REV. 1701, 1705-06, 1765 (2003).

[137] *See generally* Angela P. Harris, *Foreword: The Unbearable Lightness of Identity*, 11 BERKELEY WOMEN'S L.J. 207, 210 (1996) ("[T]he scandal of race is that both racism and anti-racism are flourishing in a culture in which the concept of 'race' itself is increasingly incoherent.").

[138] U.S. CENSUS BUREAU, Population Estimates Program, https://www.census.gov/quickfacts/fact/note/US/RHI625222 (last visited Dec. 7, 2024).

[139] On contemporary efforts to alter those categories, see Lai & Medina, *supra* note 15.

[140] *See* U.S. CENSUS BUREAU, *supra* note 138; *see also supra* note 15 and accompanying text (noting critiques of how the U.S. Census addresses race).

Census Bureau had planned to do for the most recent census in 2020 until the Trump Administration reversed course.[141]

All lawyers in our survey could be marked by more than one race; for example, if coders perceived a lawyer in a photograph to be both Hispanic or Latino and Black or African American, they could select both options. Moreover, two-thirds of adult Hispanic adults say that being Hispanic is part of their *racial* background (despite being an "ethnicity" under federal policy),[142] so adding Hispanic/Latino as a stand-alone race selection in our survey made sense. To help our coders make a judgment about the depicted lawyer's race, we provided the name of the attorney in question alongside their photograph.

For each lawyer in our dataset for whom we could find a photograph, between five and seven members of our team (including two of the authors) coded for their perception of the race of the individual attorney in question, without knowing how the other members of the team had coded the person. Out of 2,748 attorneys in our initial dataset of lawyers for whom we found photographs, the coders unanimously agreed on the race of 2,505 of them, or 91.2% of the total. Of the remaining attorneys, another 142 (5.3%) had a perceived race that at least a majority of coders agreed on, so we included the lawyer in that racial group. For only 13 attorneys a majority of our coders did not agree on a perceived race and so were excluded from our race dataset for that reason.

After we completed this initial coding, we were able to locate photographs of twenty-one additional attorneys. The perceived race of those attorneys was, in the authors' view, so clear that we coded them by mutual agreement. In the end, our dataset contained 2,668 attorneys we were able to code for perceived race — 101 fewer than we coded for gender because there were 88 lawyers for whom we could not find photographs and another 13 for whom a majority of coders could not

[141] GÓMEZ, *supra* note 15, at 161-65 (arguing that the administration was concerned that adding Latino as a race category would "increase Latinos' group solidarity and sense of belonging in America").

[142] Ana Gonzalez-Barrera & Mark Hugo Lopez, *Is Being Hispanic a Matter of Race, Ethnicity or Both?*, PEW RSCH. CTR. (June 15, 2015), https://www.pewresearch.org/short-reads/2015/06/15/is-being-hispanic-a-matter-of-race-ethnicity-or-both [https://perma.cc/8TTK-E5ZU].

agree on perceived race.[143] The 2,668 lawyers we *were* able to code for race accounted for 6,392 Federal Circuit patent case oral arguments from 2010 through 2019.

We chose perceived race over self-identified race (which is what the U.S. census captures) for several reasons. For one, there is not always an overlap between how a person is racially perceived and how they self-identify. That is, some people have an incongruence between personal racial identification and external racial categorization.[144] And racialized experiences are shaped by both racial classification that individuals claim for themselves and the external racial attributions placed on them by others.[145]

Another reason we chose to use perceived race rather than self-identified race was because external perception of race is a more salient way to assess discrimination and inequalities.[146] Perceived race is most pertinent to our study of patent litigation because, in the litigation context, people do not usually self-identify or announce their race to a judge, to their colleagues, or on a professional website. And although discrimination based on self-identified race is well-documented, people also face discrimination because they have characteristics and features

[143] These 101 lawyers accounted for 167 oral arguments or 2.5% of the arguments in our dataset.

[144] *See* Nicholas Vargas & Kevin Stainback, *Documenting Contested Racial Identities Among Self-Identified Latina/os, Asians, Blacks, and Whites*, 60 AM. BEHAV. SCIENTIST 442, 443 (2016).

[145] *See id.*

[146] Four of the six research assistants who helped code our data self-identify as white, one identifies as Black, another as Asian. The two authors who worked on the coding also identify as white. Six of the eight coders identify as female; two identify as male. Based on the large magnitude of the disparities we report below, we tend to think that any effect our racial and gender identities might have had on our coding decisions did not alter our results. That said, a person's race can affect how they perceive persons of other races. *See* Hoo Keat Wong, Ian D. Stephen & David R. T. Keeble, *The Own-Race Bias for Face Recognition in a Multiracial Society*, FRONTIERS IN PSYCH., Mar. 6, 2020, at 1; *cf.* Jussi Palomäki, Jeff Yan, David Modic & Michael Laakasuo, *"To Bluff like a Man or Fold like a Girl?" — Gender Biased Deceptive Behavior in Online Poker*, PLOS ONE, July 6, 2016, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4934693/pdf/pone.0157838.pdf [https://perma.cc/TG85-KBJH] (finding that male online poker players are more likely to bluff when playing against a player whose avatar is perceived as female — though "most participants did not believe the avatar genders influenced their decisions, suggesting that the observed effect on bluffing was *implicit*").

typically associated with a particular race, regardless of self-identification.[147]

D. Validation of Demographic Identification

Because the methodology we employed to code for perceived race was unique — and done entirely by hand — we wanted to confirm its reliability.[148]

To start that reliability check, we gathered a control sample of photographs of 100 attorneys who belonged to a race- or ethnicity-based affinity group, including attorneys from the Massachusetts Black Lawyers Association, the Hispanic National Bar Association, the Asian American Bar Association of the Greater Bay Area, the National Native American Bar Association, the Association of Polish-American Attorneys, and the Native Hawaiian Bar Association.[149]

Using affinity group membership as an indicator of race, our control sample of photographs comprised sixteen or seventeen attorneys who belonged to each of the six demographic categories on our survey:

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[147] *See* GÓMEZ, *supra* note 15, at 3 ("On the one hand, one can assert, and so essentially choose, a racial identity; but, on the other, racial identities are given to us by others. We might make a particular choice, but it could be disregarded by anyone — from a stranger to a police officer deciding whether or not you belong in a particular neighborhood to a government clerk filling out race on a death certificate . . . .").

[148] Several prior studies have, like ours, used photographs to determine the perceived race of the individuals depicted. *See, e.g.*, Jonathan B. Freeman, Andrew M. Penner, Aliya Saperstein, Matthias Scheutz & Nalini Ambady, *Looking the Part: Social Status Cues Shape Race Perception*, PLOS ONE, Sept. 2011, at 2 (using participants' answers to identify perception of a person's identity as Black or white while depicting the person in different styles of clothing); Melissa R. Herman, *Do You See What I Am? How Observers' Backgrounds Affect Their Perceptions of Multiracial Faces*, 73 SOC. PSYCH. Q. 58 (2010) (comparing a set of yearbook photographs and surveys of the photographed peoples' self-identified race to a set of answers from observers related to their perceived racial identifications); Kristin Shutts, Caroline K. Pemberton & Elizabeth S. Spelke, *Children's Use of Social Categories in Thinking About People and Social Relationships*, 14 J. COGNITION & DEV. 35 (2013) (another example of photographic sorting using two-race variables of Black or White); Emily Susan Pica, Own and Other Race Face Recognition: The Effects of Instructions and Other-Race Contact (May 2012) (M.S. thesis, University of Tennessee at Chattanooga) (on file with the University of Tennessee at Chattanooga) (similar).

[149] We did not include any attorneys who we could identify as belonging to more than one affinity group in this control sample.

American Indian or Alaska Native (16), Asian (17), Black or African American (17), Hispanic or Latino (17), Native Hawaiian or Other Pacific Islander (17), and White (16). The coders did not know about the roughly equal racial composition of the control sample, and the author who developed the control sample did not participate as a coder in the reliability check.

We presented our control sample of 100 photographs to coders in three different ways. First, we only presented each attorney's photograph. Second, we presented each attorney's photograph and full name. And third, we presented each attorney's photograph, full name, education information (including schools and degrees), gender, and other publicly available information potentially relevant to identifying someone's race or ethnicity, such as languages spoken.

When we presented the coders only with each attorney's photograph, the coders' perception of the race or ethnicity of the attorney matched the race-based or ethnicity-based affinity group of the attorney 58% of the time. When we presented the coders with each attorney's photograph and full name, the coders' perception of the race or ethnicity of the attorney matched the race-based or ethnicity-based affinity group of the attorney 72% of the time. When we presented the coders with each attorney's photograph, full name, and other identifying information, the coders' perception of the race or ethnicity of the attorney again matched the race-based or ethnicity-based affinity group of the attorney 72% of the time.

Though a 72% match rate based on name and photograph — the format we ultimately used for our study — might not seem high, the majority of mismatches were for lawyers, such as those belonging to Native American and Native Hawaiian affinity groups, that represent a small slice of the population of U.S. lawyers.[150] For the groups more commonly represented in the overall population of lawyers, our coders' perception matched the relevant affinity group almost every time. Specifically, our coders identified all attorneys who belonged to an affinity group in which we would expect most attorneys to identify as white. They identified all attorneys who belonged to an affinity group in

[150] For instance, according to the American Bar Association, less than one-half of one percent of lawyers are Native American. *See* PROFILE OF THE LEGAL PROFESSION, *supra* note 32, at 34.

which we would expect most attorneys to identify as Black or African American (the Massachusetts Black Lawyers Association, for example) as Black or African American. All but one attorney who belonged to the Asian American Bar Association of the Greater Bay Area was identified as Asian. And thirteen of seventeen attorneys who belonged to the Hispanic National Bar Association were identified as Hispanic or Latino. In short, for the four racial groups most commonly represented among the population of U.S. lawyers, the match rate was 93% (62 of 67).

That rate is similar to the incongruities found in other studies comparing self-identified race to perceived race.[151] Moreover, it is worth reiterating that perceived race — even if it is different from a lawyer's self-identified race — is arguably the most relevant metric for our study of patent litigators' professional status (as largely conferred by their peers) and case outcomes.

***

One final disclaimer before concluding our discussion of methodology: all of our data had to be manually collected and coded. That manual process included determining which Federal Circuit cases were patent cases, determining which cases were orally argued, recording the attorneys who delivered argument and their organizational affiliation, coding the outcome of the case, coding the lawyers for gender, coding the lawyers for perceived race, and then compiling all those thousands of data points into a useable dataset.

Developing a methodology for collecting and coding that information is, in our view, a major contribution of this project, and we hope our dataset provides a springboard for future work on how the demographics of the bar affect the direction of substantive law.[152] But

[151] *See* Vargas & Stainback, *supra* note 144, at 449-50.

[152] In accordance with best practices on data accessibility, *see* Robin Feldman, Mark A. Lemley, Jonathan S. Masur & Arti K. Rai, *Open Letter on Ethical Norms in Intellectual Property Scholarship*, 29 HARV. J.L. & TECH. 339, 348 (2016); Jason Chin, Kathryn Zeiler, Natali Dilevski, Alexander Holcombe, Rosemary Gatfield-Jeffries, Ruby Bishop, Simine Vazire & Sarah Schiavone, *The Transparency of Quantitative Empirical Legal Research (2018-2020)* 5 (B.U. Sch. L., Research Paper Series No. 22–4, 2021), https://scholarship.law.bu.edu/faculty_scholarship/1330 [https://perma.cc/236X-QUH3], we have made our dataset of the race and gender of Federal Circuit patent lawyers publicly available at the following link: https://doi.org/10.7910/DVN/QRUU0N.

the manual labor it entailed means that small errors probably exist in our dataset. Still, we replicated, repeated, and checked our data and analysis as much as we possibly could. And all of the crucial data analysis was done originally by the authors, not research assistants. So, we are confident that the number of errors is sufficiently small — and the datasets and, as we will soon see, the racial and gender disparities are sufficiently large — that they do not affect our overall results.

III. INEQUALITY ON APPEAL IN FEDERAL CIRCUIT PATENT CASES

This part of the Article presents our results. We begin with general data on the race and gender of lawyers who argue patent cases at the Federal Circuit. We then present more granular findings examining race and gender diversity among government lawyers, changes in representation over time, and a small group of lawyers who presented a large share of the arguments in our dataset. We conclude by considering whether any demographic differences among the lawyers who argue patent cases at the Federal Circuit correlate to case outcomes.

A. Gender and Perceived Race

Among the lawyers arguing patent appeals at the Federal Circuit, there is little gender diversity and even less racial diversity.

Of the 6,559 arguments in our dataset, 5,733 (87.4%) were by men and 826 (12.6%) were by women. Similarly, of the 2,768 individual lawyers in our dataset, 2,456 (88.7%) are men and 312 (11.3%) are women.

Of the 6,392 arguments in our dataset that we were able to code for the perceived race of the arguing lawyer,[153] 5,936 (92.9%) were by white lawyers and 456 (7.1%) were by lawyers of color.[154] Among the 456 arguments by lawyers of color, our perceived race coding was: 317 Asian (5.0% of all arguments), 73 Hispanic/Latino (1.1%), 64 Black/African American (1.0%), and 2 Native Hawaiian/Pacific Islander (less than

[153] There were 167 arguments by lawyers we were unable to code for race. *See supra* note 143.

[154] If we assume the 22 arguments by lawyers for whom a majority of coders could not agree on race coding were all delivered by lawyers of color, the number of arguments by lawyers of color would increase to 477, or 7.4% of the 6,414 total arguments in a dataset that would include those 22 arguments.

0.1%). Similarly, of the 2,667 individual lawyers in our race dataset,[155] 2,494 (93.5%) are white and 173 (6.5%) are lawyers of color.[156] Among the 173 lawyers of color, our perceived race coding was: 123 Asian (4.6% of all lawyers), 29 Black/African American (1.1%), 19 Hispanic/Latino (0.7%), and 2 Native Hawaiian/Pacific Islander (less than 0.1%).

Because the number of arguments and lawyers in our Asian, Black/African American, Hispanic/Latino, and Native Hawaiian/Pacific Islander racial groups is so small, throughout the remainder of the Article, we often combine those figures under the label "lawyers of color." To be clear, however, the majority of arguments and lawyers in that category were coded as Asian, accounting for 317 of the 456 arguments by lawyers of color (69.5%) and 123 of the 173 individual lawyers of color (71.1%). Hispanic/Latino lawyers accounted for only 73 of the 456 arguments by lawyers of color (16.0%) and 19 of the 173 individual lawyers of color (11.0%) in our dataset. And Black/African American lawyers accounted for only 64 of the 456 arguments by lawyers of color (14.0%) and 29 of the 173 individual lawyers of color (16.8%) in our dataset. In other words, though it is rare for a lawyer who is not white to argue a patent case at the Federal Circuit, it is exceedingly rare for a Hispanic/Latino or Black/African American lawyer to do so.

With that disclaimer, we can see some intersectional characteristics of the lawyers who argue patent cases at the Federal Circuit. We offer two key results, one that is unsurprising but another that is intriguing. First, the unsurprising: the majority of arguments presented to the Federal Circuit in patent cases are delivered by white men. As illustrated in Figure 1 below, of the 6,392 arguments for which we have both gender and race coding data, 5,262, or 82.3%, were delivered by white men. For comparison, 10.5% of arguments were presented by white women,[157]

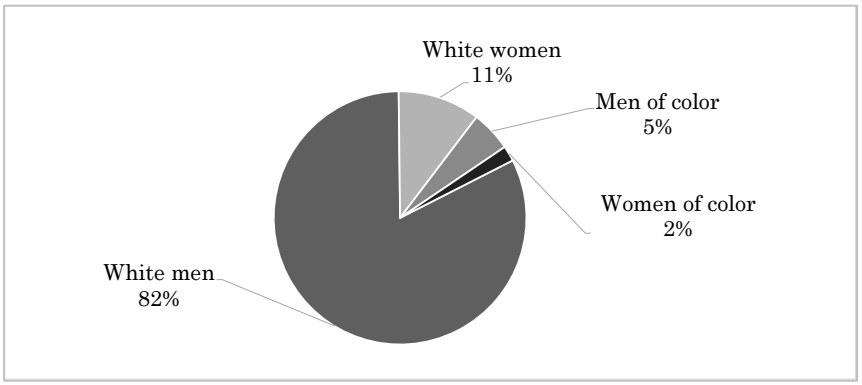
[155] There were 101 individual lawyers we were unable to code for race. *See supra* Part II.C.2.

[156] If we assume the 13 lawyers for whom a majority of coders could not agree on race coding were all lawyers of color, the number of lawyers of color would increase to 186, or 6.9% of the 2,681 lawyers in a dataset that would include those 13.

[157] 674 arguments.

5.2% were presented by men of color,[158] and 2.0% were presented by women of color.[159]

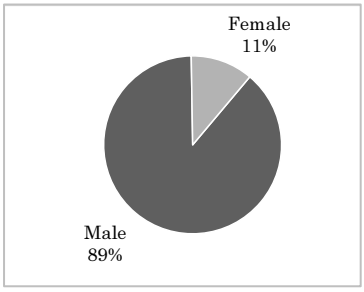
FIGURE 1. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS (2010 THOROUGH 2019)



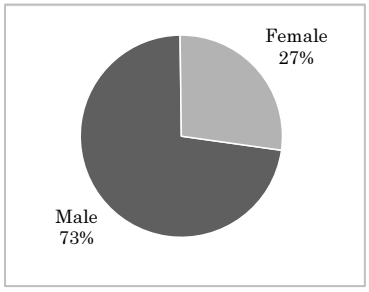
The second result is that, although the proportion of arguments delivered by lawyers of color is small, there is far more gender diversity among lawyers of color than among white lawyers. Of the 5,936 arguments in our race dataset by white lawyers, 5,262 (88.6%) were by men and 674 (11.4%) were by women. By contrast, of the 456 arguments in our race dataset by lawyers of color, 331 (72.6%) were by men and 125 (27.4%) were by women.

FIGURE 2A-B. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS (2010 THROUGH 2019)

A. WHITE LAWYERS



B. LAWYERS OF COLOR



[158] 321 arguments.

[159] 125 arguments.

To put it in simple terms: when a lawyer of color argues a patent appeal at the Federal Circuit, it is 2.4 times more likely that that lawyer will be a woman than when a white lawyer argues at the Federal Circuit.[160]

B. The Government Effect

Before digging deeper into the intersection of race and gender among patent lawyers, it is worth exploring another factor that bears a link to diversity: whether a lawyer works for the government.[161]

1. Gender and the Government

Out of the 6,559 arguments in our dataset, 5,944 were presented by lawyers arguing for private-sector clients and 615 were presented by lawyers arguing for the government.[162] Out of the 5,944 arguments delivered on behalf of private-sector clients, 5,414 (91.1%) were by men

[160] Looking at individual lawyers, rather than total arguments, yields similar proportions. Of the 2,495 lawyers coded as white in our dataset, 2,239 (89.7%) were men and 256 (10.3%) were women. And of the 173 lawyers coded as lawyers of color in our dataset, 133 (76.9%) were men and 40 (23.1%) were women. In other words, a lawyer in our dataset who is not white is 2.2 times more likely to be a woman than a white lawyer.

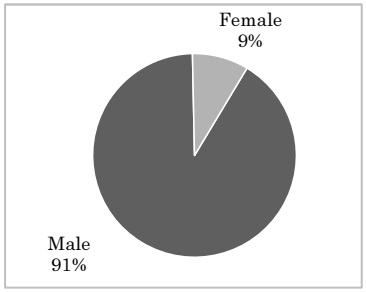
[161] Gugliuzza & Rebouché, *supra* note 23, at 1719-21.

[162] As we have explained in detail elsewhere, most of the government lawyers in our dataset (over 75%) work for the Solicitor's Office at the PTO. *See id.* at 1718. The Solicitor's Office serves as the PTO's legal counsel on matters of intellectual property law, and its most significant responsibility is defending the PTO's decisions when they are challenged in court, typically at the Federal Circuit. *See Office of the Solicitor*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/about-us/organizational-offices/office-general-counsel/office-solicitor (last visited Aug. 21, 2024, 10:49 AM) [https://perma.cc/L3GA-26HC]. The remainder of government attorneys in our dataset come from the International Trade Commission (which, as discussed above, *see supra* note 116, has jurisdiction over certain patent matters) and various components of the Department of Justice. Finally, one of the government lawyers in our dataset, Nathan K. Kelley, entered private practice the final year of our study and delivered one Federal Circuit argument that year. For simplicity's sake, we have treated him as a government lawyer throughout. Though that overstates the number of government arguments in our dataset by one, Kelley conducted over twenty arguments at the PTO's Solicitor's Office, so we think that approach is defensible.

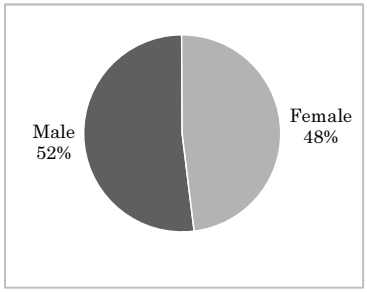
and 530 (8.9%) were by women.[163] By contrast, out of the 615 arguments in our dataset that were delivered on behalf of the government, 319 (51.9%) were by men and 296 (48.1%) were by women.[164]

FIGURE 3A-B. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS (2010 THROUGH 2019)

A. PRIVATE-SECTOR LAWYERS



B. GOVERNMENT LAWYERS



Simply put, the contrast in gender makeup of private-sector attorneys as compared to government attorneys arguing patent appeals could hardly be starker. When a government attorney argues a patent case at the Federal Circuit, it is over five times more likely that the attorney will be a woman as compared to an attorney arguing on behalf of a private-sector client.

2. Perceived Race and the Government

We also see a distinction between private-sector lawyers and government lawyers when we look at perceived race.

Out of the 6,392 arguments in our dataset we were able to code for race, 5,825 were presented by lawyers arguing for private-sector clients and 567 were presented by lawyers arguing for the government. Out of the 5,825 arguments delivered on behalf of private-sector clients, 5,453 (93.6%) were delivered by white lawyers and 372 (6.4%) were delivered

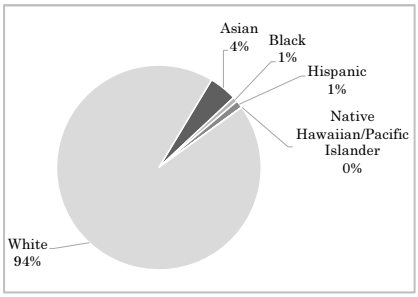
[163] Of the 2,682 individual private-sector lawyers in our dataset, 2,409 (89.8%) are men and 273 (10.2%) are women.

[164] As for individual government lawyers, 48 (55.2%) are men and 39 (44.8%) are women.

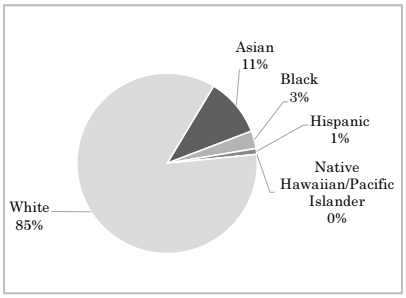
by lawyers of color.[165] By contrast, out of the 567 arguments in our dataset delivered on behalf of the government that we were able to code for lawyer race, 483 (85.2%) were delivered by white lawyers and 84 (14.8%) were delivered by lawyers of color.[166]

FIGURE 4A-B. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS (2010 THROUGH 2019)

A. PRIVATE-SECTOR LAWYERS



B. GOVERNMENT LAWYERS



In other words, when a government attorney argues a patent case at the Federal Circuit, it is 2.3 times more likely that that attorney will be a person of color as compared to an attorney arguing on behalf of a private-sector client.

That government/private-sector difference is smaller than we saw in analyzing attorney gender; nearly half of arguments on behalf of the government were delivered by women.[167] But people of color comprise 14% of the total population of lawyers in the United States[168] — almost the same percentage of lawyers of color who argued patent cases at the Federal Circuit on behalf of the government during the time period covered by our study.

[165] Of the 2,596 individual private-sector lawyers in our race dataset, 2,436 (93.8%) are white lawyers and 160 (6.2%) are lawyers of color.

[166] As for individual lawyers, 59 (81.9%) were white and 13 (18.1%) were lawyers of color.

[167] *See supra* FIGURE 3B.

[168] *See* PROFILE OF THE LEGAL PROFESSION, *supra* note 32.

3. Race, Gender, and the Government

The data above make clear that, on both gender and racial lines, the demographics of the government lawyers arguing patent cases at the Federal Circuit look like the demographics of the U.S. legal profession as a whole. The lawyers arguing patent cases on behalf of private-sector clients, by contrast, are much whiter and more male than the rest of the practicing bar.

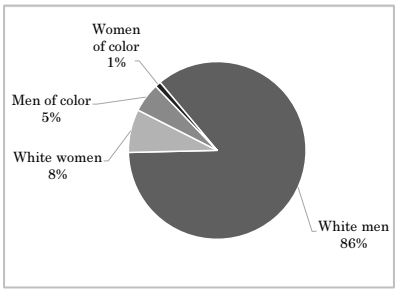
The differences between the private sector and the government are rendered particularly starkly when we combine our gender and race data to perform an intersectional analysis.

Out of the 5,825 arguments in our dataset by a private-sector lawyer we could code for race, 4,996 (85.8%) were by white male lawyers, 457 (7.8%) were by white women lawyers, 312 (5.4%) were by male lawyers of color, and 60 (1.0%) were by women lawyers of color.

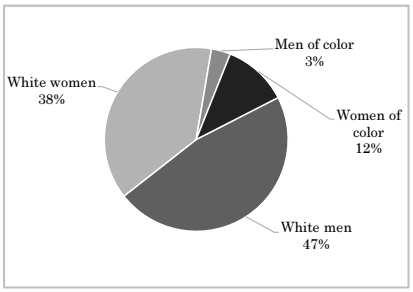
Though the raw numbers are smaller, women of color comprise a far greater proportion of arguments delivered on behalf of the government. Out of the 567 arguments in our dataset by a government lawyer who we could code for race, 266 (46.9%) were by white male lawyers, 217 (38.3%) were by white women lawyers, 19 (3.4%) were by male lawyers of color, and 65 (11.5%) were by women lawyers of color.

FIGURE 5A-B. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS (2010 THROUGH 2019)

A. PRIVATE-SECTOR LAWYERS



B. GOVERNMENT LAWYERS



In other words, our data indicate that an attorney arguing a Federal Circuit patent case for the government is over ten times more likely to be a woman of color than an attorney arguing for a private-sector litigant. Indeed, though the number of government arguments in our

dataset (567) is less than one-tenth the number of arguments by private-sector lawyers (5,825), the government had a greater number of arguments presented by women of color (65) than the private sector did (60).

C. Changes Over Time

Changes in patent law itself seem to have had the unexpected effect of altering the demographics of lawyers arguing patent cases at the Federal Circuit. In 2011, Congress passed the America Invents Act ("AIA"),[169] the most significant amendment to the federal patent statute in fifty years. In hindsight, the most important aspect of the Act was its creation of new proceedings through which the PTO can take a second look at the validity of patents it has already issued.[170] Over the past decade, defendants in patent infringement cases have eagerly used those new administrative proceedings to challenge the validity of the patents they have been sued for infringing.[171]

The AIA seems to have brought more women and, perhaps, more women of color into Federal Circuit patent litigation. That is because appeals in the new administrative proceedings go exclusively to the Federal Circuit,[172] the Patent Office itself often participates in those appeals,[173] and, as we showed above, government lawyers in Federal Circuit patent cases are far more likely to be women, people of color, and women of color than lawyers arguing on behalf of private-sector clients.[174]

To provide context for post-AIA developments: In 2011, the year Congress passed the Act, the Federal Circuit heard only forty-two

[169] America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011).

[170] *See* Stuart Minor Benjamin & Arti K. Rai, *Administrative Power in the Era of Patent Stare Decisis*, 65 DUKE L.J. 1563, 1564-65 (2016).

[171] *See* Greg Reilly, *The Justiciability of Cancelled Patents*, 79 WASH. & LEE L. REV. 253, 268-69 (2022).

[172] *See* 35 U.S.C. § 141(c).

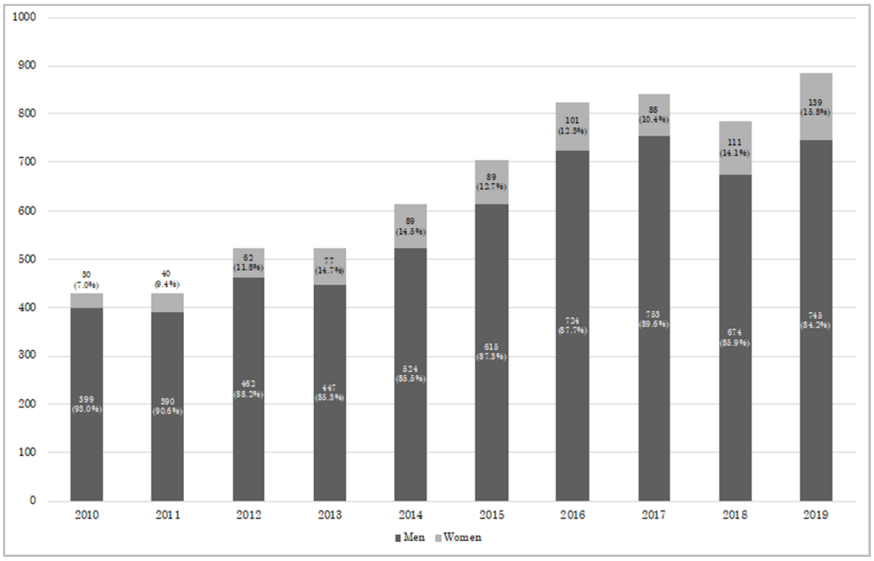
[173] *See id.* § 143 (providing the Director of the PTO the right to intervene in any Federal Circuit appeal of post-issuance proceedings).

[174] *See supra* Parts III.B.1–3.

appeals from the PTO. By 2019 (the final year of our study), that number had ballooned to 241.[175]

The proportion of women presenting oral argument in Federal Circuit patent cases increased hand in glove: from 9.5% in the years 2010 through 2012 to 13.5% in the years 2017 through 2019, as Figure 6 below illustrates.

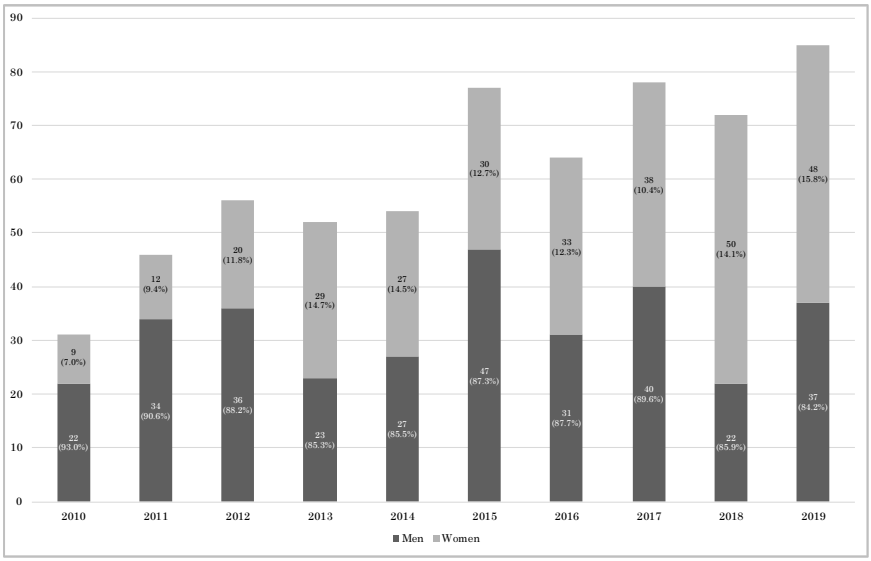
FIGURE 6. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS, ALL LAWYERS (2010 THOROUGH 2019)



As Figure 7 illustrates, that the overall growth in women lawyers at the Federal Circuit was driven largely by lawyers appearing on behalf of the government. The proportion of women presenting oral argument in Federal Circuit patent cases on behalf of the government increased from 30.8% in the years 2010 through 2012 to 57.9% in the years 2017 through 2019.

[175] Gugliuzza & Rebouché, *supra* note 23, at 1717.

FIGURE 7. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS, GOVERNMENT LAWYERS ONLY (2010 THOROUGH 2019)



Turning to our data about perceived race, the number and proportion of lawyers of color arguing patent cases at the Federal Circuit also grew steadily over the time period of our study. But, unlike with gender, it is not as clear that government lawyers (or, derivatively, the America Invents Act) were driving the growth in racial diversity.

Figure 8 below reflects the overall percentage of lawyers of color arguing Federal Circuit patent cases from 2010 through 2019. Slow, steady growth is apparent. Indeed, the percentage nearly doubled over the decade covered by our study.

FIGURE 8. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS BY LAWYERS OF COLOR (2010 THROUGH 2019)

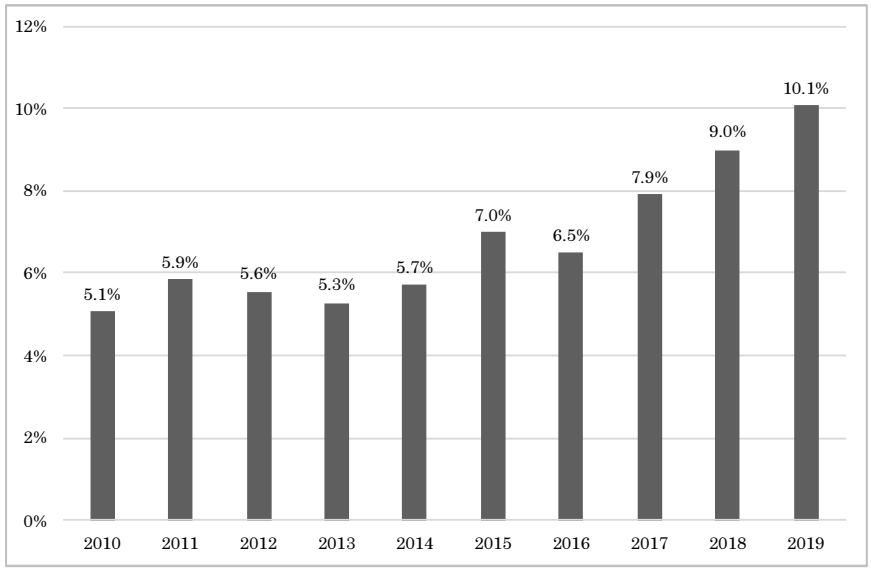
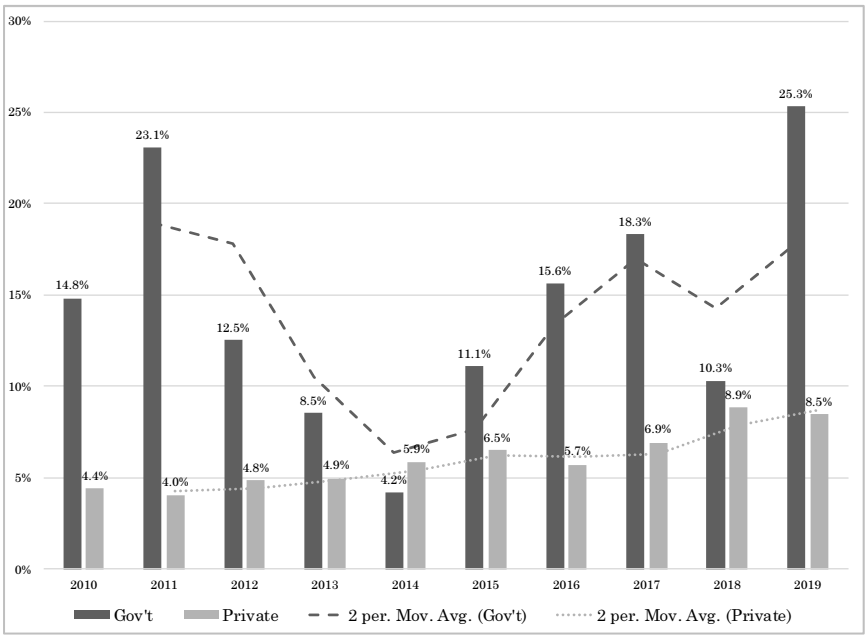


Figure 9 below divides the total population of lawyers of color presenting argument in Federal Circuit patent cases between (1) lawyers representing the government and (2) lawyers representing private parties.

FIGURE 9. FEDERAL CIRCUIT PATENT CASE ORAL ARGUMENTS BY LAWYERS OF COLOR, GOVERNMENT VERSUS PRIVATE-SECTOR LAWYERS (2010 THROUGH 2019)



As the figure indicates, the growth in arguments by lawyers of color representing private-sector clients has been steadier than the comparable figures for the government. During the first three years covered by our study, 2010 through 2012, lawyers of color presented 4.4% of oral arguments in Federal Circuit patent cases on behalf of private parties. Over the last three years covered by our study, however, that percentage had nearly doubled to 8.1%.

By contrast, from 2010 through 2012, lawyers of color presented 16.7% of oral arguments in Federal Circuit patent cases on behalf of the government. From 2017 through 2019, that percentage increased only to 18.5%.

Of course, the number of arguments by government attorneys in any given year is only about 10% of the number of private-sector arguments, so statistics regarding government lawyers will inevitably appear more volatile. It also makes it difficult to present a meaningful, year-by-year intersectional analysis of both race and gender because the arrival or

departure of, for instance, one woman of color from government practice can change a particular year's results. That said, it is worth noting that seven of the nine individual government lawyers in our dataset who are women of color argued at least one case during the final year of our study (2019), while, in the first year of our study (2010), there were *zero* arguments by government lawyers who were women of color.

D. The Most Frequent Federal Circuit Advocates

The appellate patent bar, like the appellate bar in most areas of litigation today, is highly stratified. A small number of lawyers, mostly in private practice at the biggest, most profitable, and most prestigious law firms in the world (along with a few government attorneys), present a disproportionate share of arguments in both the federal courts of appeals and the U.S. Supreme Court.[176]

Our datasets of Federal Circuit patent case oral arguments include 2,668 individual lawyers who we were able to code for both race and gender. But 90 of those lawyers, 3.4% of the total, delivered 10 or more arguments, accounting for 22.7% of all the arguments in our dataset (1,450 of 6,392). So, when looking at the face of the patent bar, it is arguably that small group of lawyers we should think about most, for they appear before the Federal Circuit most frequently, in the biggest cases, on behalf of the most powerful clients.

Of the 65 private-sector lawyers in the top 90, 45 are affiliated with a law firm listed in the Vault 100 ranking of the "most prestigious" firms in the United States.[177] In fact, of the eighteen private-sector lawyers

[176] For studies documenting this effect, see *supra* note 39; *see also* Janet Roberts, Joan Biskupic & John Shiffman, *Special Report: In Ever-Clubbier Bar, Eight Men Emerge as Supreme Court Confidants*, REUTERS (Dec. 8, 2014, 2:57 AM), https://www.reuters.com/article/us-scotus-advocates-specialreport/special-report-in-ever-clubbier-bar-eight-men-emerge-as-supreme-court-confidants-idUSKBN0JM11E20141208 ("[A] group of eight lawyers, all men, accounted for almost 20 percent of all the arguments made before the [Supreme Court] by attorneys in private practice during the past decade.").

[177] *See Vault Law 100*, VAULT, https://firsthand.co/best-companies-to-work-for/law/top-100-law-firms-rankings (last visited Aug. 21, 2024, 1:37 PM) [https://perma.cc/4ENW-CKFT]. For the purpose of this analysis, we used each lawyer's affiliation as of the last argument they conducted in our dataset. The one exception was Nate Kelley. *See supra* note 162.

with fifteen or more arguments in our dataset, every single one is affiliated with a firm ranked in Vault's *Top 50*. An additional five private-sector lawyers in our subset of most frequent advocates are affiliated with the patent-law powerhouse, Finnegan, which is consistently one of the top two in the Vault rankings of intellectual property firms.[178] And several more are affiliated with firms that, ranked or not, are household names among patent or appellate lawyers.[179]

Much like the overall dataset, the subset of lawyers who most frequently argue patent appeals at the Federal Circuit is overwhelmingly white and male, but slightly less so. Of the 90 lawyers in that subset, 73 (81.1%) are male and 17 (18.9%) are female. Compare our dataset overall, where only 11.4% of lawyers are female. The higher percentage of women in our most-frequent-advocate subset, however, is due to the large proportion of government lawyers who appear in it — 25 of the top 90 are government lawyers, and 12 of the 17 women lawyers in the top 90 are government lawyers.

As for race, 81 of the top 90 lawyers (90.0%) are white and 9 (10.0%) are lawyers of color — a higher percentage of lawyers of color than in our dataset overall (7.1%). The greater percentage of lawyers of color among the top 90 is not necessarily driven by lawyers working for the government, however. Of the 25 government lawyers in the top 90, 22 (88.0%) are white and 3 (12.0%) are lawyers of color.[180] For comparison, of the 65 private-sector lawyers in the top 90, 59 (90.8%) are white and 6 (9.2%) are lawyers of color.[181]

Putting our race and gender data together, the subset of lawyers who most frequently argue patent appeals at the Federal Circuit is, like the Federal Circuit patent bar as a whole, overwhelmingly white and male, but slightly less so. Overall, 83.9% of the individual lawyers in our dataset are white men. Among the top 90 lawyers, that percentage drops

[178] *See 2019 Best Law Firms for Intellectual Property*, VAULT, https://legacy.vault.com/best-companies-to-work-for/law/best-law-firms-in-each-practice-area/intellectual-property/year/2019 (last visited Aug. 21, 2024, 1:56 PM) [https://perma.cc/4GBX-4VBL].

[179] For instance, lawyers from Knobbe Martens, Sterne Kessler, MoloLamken, and formerly Durie Tangri all show up in the top 90.

[180] Two we coded as Asian and one we coded as Black.

[181] Of those six lawyers of color, four we coded as Asian and two we coded as Hispanic/Latino.

to 75.6% (68 of 90). Thirteen of the top 90 are white women (14.4%). Five of the top 90 are men of color (5.6%).[182] And four are women of color (4.4%)[183] — a percentage that is almost three times higher than in our dataset overall (1.5%).

That increased diversity among the top lawyers is due almost entirely to the government lawyers who are among the most frequent Federal Circuit advocates. Of the 25 government lawyers in the top 90, 13, or only 52.0%, are white men. Nine are white women (36.0%), and all three lawyers of color who are government lawyers are *women* of color (12.0%).[184] By contrast, among the sixty-five most frequent Federal Circuit advocates in private practice, only *one* is a woman of color (1.5%).[185] Fifty-five are white men (84.6%). Four are white women (6.2%). And five are men of color (7.7%).[186] Those figures are all roughly in line with our dataset overall.[187]

E. Win Rates

We thus far have documented significant racial and gender disparities in the practice of patent law at its highest levels. Barely 10% of patent appellate arguments from 2010 through 2019 were delivered by attorneys we coded as women, less than 10% were delivered by attorneys our coders perceived to be lawyers of color, and less than 2% were delivered by women of color. And Black and Hispanic/Latino attorneys comprise only a fraction of those lawyers of color and women of color subsets.

Yet our data indicate that racial and gender disparities among lawyers arguing patent cases at the Federal Circuit bear no correlation to attorneys' winning cases. Across both race and gender, lawyers' appellate win rates are basically indistinguishable. Whether represented by a lawyer we coded as a man or a woman, or a lawyer perceived as white or a person of color, or a white male lawyer or a woman of color,

[182] Four we coded as Asian, one we coded as Hispanic/Latino.

[183] Two we coded as Asian, one we coded as Hispanic/Latina, one we coded as Black.

[184] As noted *supra* note 181, two we coded as Asian and one we coded as Black.

[185] Coded as Hispanic/Latina.

[186] Four we coded as Asian, one we coded as Hispanic/Latino.

[187] Overall, 84.9% of private-sector lawyers in our dataset are white male, 8.9% are white female, 5.0% are men of color, and 1.2% are women of color.

appellants in Federal Circuit patent cases win about a quarter of the time and appellees win about three-quarters of the time.

1. Calculating Win Rates

In calculating win rates for Federal Circuit lawyers, we distinguished cases in which a lawyer represented an appellant (the party seeking to overturn the judgment below) from cases in which a lawyer represented an appellee (the party defending the judgment below) because appellants and appellees win at different rates. Out of the 2,694 arguments by appellant lawyers in our dataset that we were able to code for outcome, only 728, or 27.0%, were anything besides a full affirmance. That is, the appellant won only 27.0% of the time. By contrast, out of the 2,677 arguments by appellee lawyers we were able to code for outcome,[188] 1,979, or 73.9% were full affirmances. That is, appellees won 73.9% of the time. Because appellees win at the Federal Circuit roughly three times as frequently as appellants, we segmented our dataset accordingly.

2. Appellant Win Rates

Appellants represented by women attorneys at oral argument won slightly more frequently than appellants represented by male attorneys (a 30.2%-win rate for women versus a 26.8%-win rate for men), as reported in Table 1 below.

TABLE 1. APPELLANT WIN RATES, BY ARGUING LAWYER GENDER, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellant affirmed (loss)	Appellant not affirmed (win)	Appellant win rate
Men	1832	670	26.8%
Women	134	58	30.2%
Total	1966	728	27.0%

[188] The number of arguments for appellants and appellees differs slightly because some cases involved more than one lawyer presenting argument for a particular side.

Conversely, appellants represented by attorneys of color won slightly less frequently than appellants represented by white attorneys (a 24.6%-win rate for attorneys of color versus a 27.5%-win rate for white attorneys), as reported in Table 2 below.

TABLE 2. APPELLANT WIN RATES, BY ARGUING LAWYER RACE, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellant affirmed (loss)	Appellant not affirmed (win)	Appellant win rate
Asian	97	31	**24.2%**
Black	15	5	**25.0%**
Hispanic/Latino	13	5	**27.8%**
Hawaiian/Pac. Isl.	1	0	**0.0%**
Subtotal	126	41	**24.6%**
White	1782	677	**27.5%**
Total	1908	718	**27.3%**

Neither of those small differences, however, is statistically significant.[189]

3. Appellee Win Rates

Like with appellants, appellees represented by female attorneys won more frequently than appellees represented by male attorneys (a 78.7%-win rate for women versus a 72.9%-win rate for men), as reported in

[189] For the appellant male/female comparison, p = 0.32. For the appellant white/lawyer of color comparison, p = 0.39. Because our dataset includes the entire population of relevant cases during the time period of interest, any differences we report are arguably statistically significant by definition. But, to provide a sense of the importance of observed differences, we occasionally report p-values, based on the assumption that our data is a sample of a larger population. To calculate p-values, we used Microsoft Excel to perform a two-tail t-test, assuming unequal variances.

Table 3 below. That nearly 6% difference, it is worth noting, is statistically significant ($p < 0.01$).[190]

TABLE 3. APPELLEE WIN RATES, BY ARGUING LAWYER GENDER, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Men	1617	600	**72.9%**
Women	362	98	**78.7%**
Total	1979	698	**73.9%**

On the appellee side, parties represented by attorneys of color at oral argument also won more frequently than appellees represented by white attorneys, though the small difference reported in Table 4 below (75.2% for attorneys of color versus 74.0% for white attorneys) is not statistically significant ($p = 0.70$).

[190] We cannot control for the substantive strength of the cases in our dataset. Some readers of this Article have hypothesized that women are given "easy" cases to argue — that is, the "sure winners." But that would contrast with studies in the corporate world finding that women are more likely than men to be put in positions where failure is likely. *See, e.g.*, Michelle K. Ryan & S. Alexander Haslam, *The Glass Cliff: Evidence That Women are Over-Represented in Precarious Leadership Positions*, 16 BRIT. J. MGMT. 81, 85-87 (2005) (finding that poorly performing companies were more likely to appoint women to leadership positions, who were then blamed for negative outcomes that were largely beyond their control); *see also* SYLVIA ANN HEWLETT, CAROLYN BUCK LUCE, LISA J. SERVON, LAURA SHERBIN, PEGGY SHILLER, EYTAN SOSNOVICH & KAREN SUMBERG, HARV. BUS. REV., THE ATHENA FACTOR: REVERSING THE BRAIN DRAIN IN SCIENCE, ENGINEERING, AND TECHNOLOGY 27 (2008) https://lawcat.berkeley.edu/record/1127365/files/0Athena_Factor___Brain_Drain_in_Scienc.pdf [https://perma.cc/3EPU-6EUR] (finding that women in science, engineering, and technology companies are reluctant to take risks because they believe they will not get "second chances"). In any event, we are not making a causal claim here, just reporting that appellee win rates in cases argued by women are higher than appellee win rates in cases argued by men.

TABLE 4. APPELLEE WIN RATES, BY ARGUING LAWYER RACE, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Asian	107	33	**76.4%**
Black	22	4	**84.6%**
Hispanic/Latino	25	14	**64.1%**
Hawaiian/Pac. Isl.	1	0	**100.0%**
Subtotal	155	51	**75.2%**
White	1771	622	**74.0%**
Total	1926	673	**74.1%**

An additional matter to examine involving win rates is whether women lawyers or lawyers of color fare better or worse when arguing for a private-sector client as compared to arguing on behalf of the government. The government is rarely an appellant in patent cases at the Federal Circuit — it happened only four times in our entire dataset.[191] Rather, the government is almost always involved in Federal Circuit litigation as an appellee, usually defending some action of the Patent Office.[192]

Between male and female attorneys representing the government as an appellee, win rates were basically indistinguishable: 80.3% for men and 80.9% for women, as reported in Table 5 below.[193]

[191] One of those four cases involved a lawyer we were unable to code for race.

[192] *See supra* note 171.

[193] This result was not statistically significant ($p = 0.87$).

TABLE 5. APPELLEE WIN RATES, BY ARGUING LAWYER GENDER, GOVERNMENT LAWYERS ONLY, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Men	175	43	**80.3%**
Women	161	38	**80.9%**
Total	336	81	**80.6%**

For private-sector attorneys, women maintain a roughly 5% advantage in win rates as appellees, as Table 6 below indicates. But removing the disproportionately female and successful government lawyers from the dataset makes the difference in win rates between male and female private-sector attorneys significant only at the 10% level (p = 0.08).

TABLE 6. APPELLEE WIN RATES, BY ARGUING LAWYER GENDER, PRIVATE-SECTOR LAWYERS ONLY, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Men	1442	557	**72.1%**
Women	201	60	**77.0%**
Total	1643	617	**72.7%**

As between white attorneys and attorneys of color representing the government as an appellee, win rates were also basically indistinguishable: 82.0% for white lawyers and 81.7% for lawyers of color, as reported in Table 7 below.[194]

[194] This was not statistically significant (p = 0.96).

TABLE 7. APPELLEE WIN RATES, BY ARGUING LAWYER RACE, GOVERNMENT LAWYERS ONLY, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Asian	38	7	**84.4%**
Black	7	2	**77.8%**
Hispanic/Latino	4	2	**66.7%**
Hawaiian/Pac. Isl.	0	0	**0.0%**
Subtotal	49	11	**81.7%**
White	259	57	**82.0%**
Total	308	68	**81.9%**

Among private-sector attorneys, white lawyers also have a slight but insignificant advantage in win rates as appellees (p = 0.96), as Table 8 indicates.

TABLE 8. APPELLEE WIN RATES, BY ARGUING LAWYER RACE, PRIVATE-SECTOR LAWYERS ONLY, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Asian	69	26	**72.6%**
Black	15	2	**88.2%**
Hispanic/Latino	21	12	**63.6%**
Hawaiian/Pac. Isl.	1	0	**100.0%**
Subtotal	106	40	**72.6%**
White	1512	565	**72.8%**
Total	1618	605	**72.8%**

4. Intersectional Win Rates

Because we collected data on both the race and gender of arguing lawyers, we can combine our gender and race data for intersectional comparisons of win rates. We find no meaningful disparities in case outcomes.

Tables 9 and 10 below, for instance, compare the win rates of women of color against white men. White men do better than women of color on the appellant side (a 27.1%-win rate for white men versus 8.3% for women of color.) But women of color do better than white men on the appellee side (an 80.5%-win rate for women of color versus 73.1% for white men). And the population of decisions involving lawyers who are women of color is so small (fewer than 100 in a dataset of over 5,000 case outcomes) we are not sure the win rates reflect any meaningful differences.[195] Indeed, as we explain in an accompanying footnote, the proportion of Black and Latina women, specifically, in our women of color subset is extremely small.[196]

[195] For the differing appellant win rates, the *p*-value of a two-tail t-test, *see infra* note 196, is 0.047, which could be interpreted to indicate statistical significance at the 5% level. But we are not inclined to put much faith in that result given the divergent population sizes. *Cf.* Mingeng Lin, Henry C. Lucas, Jr. & Galit Shmueli, *Too Big to Fail: Large Samples and the* p-*Value Problem*, 24 INFO. SYS. RES. 906, 907 (2013) ("[W]ith extremely large samples, we should go beyond rejecting a null hypothesis based on . . . the *p*-value. . . . [C]onclusions based on significance . . . alone . . . are meaningless unless interpreted in light of the actual magnitude of the effect size."). For the differing appellee win rates, there is no indication of statistical significance ($p = 0.107$).

[196] Out of the eleven appellant losses in cases argued by women of color reported in Table 9, two were cases argued by a woman coded as Latina and one was argued by a woman coded as Black. The remaining eight were argued by women coded as Asian. The one appellant win in a case argued by a woman of color reported in Table 9 was argued by a woman coded as Black.

Out of the 66 appellee wins in cases argued by women of color reported in Table 10, 12 were cases argued by a woman coded as Black and 11 were argued by a woman coded as Black. The remaining forty-three were argued by women coded as Asian. Out of the sixteen appellee losses in cases argued by women of color reported on Table 10, five were cases argued by a woman coded as Latina and two were argued by a woman coded as Black. The remaining nine were argued by women coded as Asian.

TABLE 9. APPELLANT WIN RATES, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellant affirmed (loss)	Appellant not affirmed (win)	Appellant win rate
Women of color	11	1	**8.3%**
White men	1665	620	**27.1%**
Total	1676	621	**27.0%**

TABLE 10. APPELLEE WIN RATES, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Women of color	66	16	**80.5%**
White men	1487	546	**73.1%**
Total	1553	562	**73.4%**

Out of the 82 appellee arguments by women of color in our dataset, more than half (46, or 56.1%) were by government lawyers.[197] As we discussed above, government lawyers, overall, win more frequently as appellees than lawyers from the private sector,[198] which would partially explain why women of color fare better than white men when representing appellees.

That said, women of color representing the government win at roughly the same rate as white men. In our dataset, women of color representing the government as an appellee won in 40 of 46 cases

[197] Consistent with our dataset overall, a majority of the arguments by government lawyers who are women of color were by lawyers we coded as Asian (35 of 46). Nine were by the lone Black woman government lawyer who had appellee case outcome information in our dataset, and two were by the one Latina woman government lawyer who had appellee case outcome information in our dataset.

[198] See TABLES 5 and 6, *supra*, reporting an appellee win rate of 80.6% for government lawyers in our dataset as compared to 72.7% for lawyers from the private sector.

(87.0%),[199] while white men representing the government as an appellee won in 146 of 173 cases (84.4%).

The same goes for women of color representing appellees from the private sector. In our dataset, women of color representing a private-sector client as an appellee won in 26 of 36 cases (72.2%),[200] while white men representing a private-sector client as an appellee won in 1341 of 1860 cases (72.1%).

5. Win Rates for the Most Frequent Federal Circuit Advocates

Though we see few differences in win rates along gender or racial lines, or even when we combine the two, there is one identifiable cohort of lawyers who win Federal Circuit patent appeals more frequently than the rest: lawyers who have ten or more oral arguments in our dataset.

The superior win rate among those most frequent Federal Circuit advocates is clearest when they appear on behalf of an appellant, seeking to overturn an adverse ruling by a district court, the PTO, or the International Trade Commission. As Table 11 below illustrates, the most frequent advocates win as appellants over 40% of the time, as compared to a 24.3%-win rate for all other appellant lawyers, a difference that is statistically significant ($p < 0.01$).

TABLE 11. APPELLANT WIN RATES, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellant affirmed (loss)	Appellant not affirmed (win)	Appellant win rate
Most frequent	263	181	**40.8%**
All others	1703	547	**24.3%**
Total	1966	728	**27.0%**

[199] Of the six appellee losses, four were by women coded as Asian, two were by women coded as Black.

[200] Specifically, women coded as Asian won 12 of 17 cases, women coded as Latina won 9 of 14, and women coded as Black won 5 of 5.

Recall also that there are practically no cases in our dataset in which the government was the appellant,[201] so these results are driven entirely by high win rates among the sixty-five private-sector lawyers in our dataset who argued ten or more patent cases at the Federal Circuit during the decade covered by our study. Much like with Federal Circuit reversal rates, which are dramatically lower for district judges who have previously sat by designation on the Federal Circuit,[202] lawyers who often argue before the Federal Circuit win more often, at least as appellants, than all others.

To be sure, some of the success we document could stem from frequent advocates' ability to distinguish cases that are likely winners on appeal from those that are likely losers, and taking only the likely winners to a merits decision at the Federal Circuit.[203] And, interestingly, on the appellee side, where the party has no choice but to defend the judgement below, the advantage of frequent advocates mostly disappears. As Table 12 shows, the most frequent advocates won as appellees in 76.1% of the cases in our dataset while all other lawyers won 73.2% of the time, a difference that is not statistically significant (p = 0.13).

TABLE 12. APPELLEE WIN RATES, FEDERAL CIRCUIT PATENT APPEALS (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Most frequent	521	164	**76.1%**
All others	1458	534	**73.2%**
Total	1979	698	**73.9%**

[201] *See supra* note 191 and accompanying text.

[202] Mark A. Lemley & Shawn P. Miller, *If You Can't Beat 'Em, Join 'Em? How Sitting by Designation Affects Judicial Behavior*, 94 TEX. L. REV. 451, 452 (2016).

[203] *Cf.* Sheelah Kolhatkar, *How Alex Shapiro Keeps the Rich and Famous Above the Law*, NEW YORKER (July 24, 2023), https://www.newyorker.com/magazine/2023/07/31/how-alex-spiro-keeps-the-rich-and-famous-above-the-law [https://perma.cc/8XLP-8YTQ] ("Spiro can plausibly claim that in private practice he's never lost a case before a jury in part because he's canny about what he takes on and what he walks away from.").

Any advantage the most frequent advocates have as appellees seems driven by the twenty-five government lawyers who are part of that group. When limited to private-sector lawyers, the most frequent advocates win as appellees only 70.7% of the time; all other lawyers win 73.1% of the time (a difference that is not statistically significant (p = 0.34)).

TABLE 13. APPELLEE WIN RATES, FEDERAL CIRCUIT PATENT APPEALS, PRIVATE-SECTOR LAWYERS ONLY (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Most frequent	280	116	**70.7%**
All others	1363	501	**73.1%**
Total	1643	617	**72.7%**

Among government lawyers, our data also indicate that lawyers who argue patent cases at the Federal Circuit more frequently have higher win rates as appellees. Specifically, the government lawyers who are in the subset of most frequent Federal Circuit advocates won 83.4% of their cases as appellees, compared to a 74.2%-win rate for government lawyers who are not in the subset of most frequent advocates. Though that difference is statistically significant at the 5% level (p = 0.04), we caution that there are almost certainly factors at play beyond experience at the Federal Circuit (or the Federal Circuit judges' familiarity with the lawyers). Most notably, all twenty-five of the government lawyers in our dataset who are among the ninety most frequent Federal Circuit advocates work at the PTO Solicitor's Office, which has inherent advantages as a litigant. The remaining government lawyers in our dataset come from a variety of federal agencies, litigating more unusual cases. For these reasons, we would not read too much into the differences in win rates among government lawyers reported in Table 14 below.

TABLE 14. APPELLEE WIN RATES, FEDERAL CIRCUIT PATENT APPEALS, GOVERNMENT LAWYERS ONLY (2010 THROUGH 2019)

	Appellee affirmed (win)	Appellee not affirmed (loss)	Appellee win rate
Most frequent	241	48	**83.4%**
All others	95	33	**74.2%**
Total	336	81	**80.6%**

IV. IMPLICATIONS AND POSSIBLE REFORMS

We begin this final part by summarizing our key findings and exploring their implications. We then draw on our quantitative analysis for ideas about how to change the composition and culture of the patent appellate bar and the most exclusive areas of law practice more generally.

A. Key Findings

Our study of the lawyers arguing patent appeals at the Federal Circuit offers four takeaways worth highlighting.

First, the bar arguing Federal Circuit patent appeals is overwhelmingly white (93% of all arguments) and overwhelmingly male (89% of all arguments). Indeed, white males alone represent 82% of the arguments in our dataset. As we have noted throughout this Article, women of color, by contrast, represent barely 2% of arguments, and Black women and Latina women each account for less than 1%. The magnitude of underrepresentation, given the number of women, people of color, and women of color who practice law in the United States today,[204] is stark.

The fact that almost all patent appeals are argued by white men reflects a continuing exclusion of women and people of color from high-status professions that is unlikely to disappear without conscious and concerted efforts to make things more equal and just. It will certainly not be remedied by seeing those disparities as natural or inevitable

[204] In the United States, 37% of practicing lawyers are women, 14% are people of color, and 8% are women of color. *See infra* Part I.A.

rather than the product of longstanding, systemic, institutional barriers to equality.

Second, among the few lawyers of color who argue patent cases at the Federal Circuit, there are noticeably more women: 27% of arguments by lawyers of color were delivered by women, as compared to 11% of arguments by white lawyers.[205] One interpretation of that finding is that once women of color gain entry into the profession, they attain success in high-profile positions. But the overall scarcity of women of color in high-level patent litigation suggests that numerous barriers persist, such as stereotypes about their skills or interests and institutional impediments stemming from law firm incentive structures and culture.[206]

One thing our data cannot tell us is what caused some women of color to enter the appellate patent bar and stay there. For instance, what retention strategies did their firms use? How were they promoted once they gained a foothold in their practice? Fortunately, a conversation has begun to emerge among lawyers, law firms, the government, and the academy to answer those questions and to develop best practices for advancing diversity in patent-related professions.[207] The noticeably large representation of women among the few lawyers of color in our dataset is a topic ripe for further exploration.

Third, it is interesting that the proportions of patent case arguments presented on behalf of the government by women and people of color (48% women, 15% people of color) are similar to (indeed, a bit higher than) those groups' representation in the overall population of lawyers

[205] Specifically, of the 456 arguments by lawyers of color in our dataset, 125 were by women. Seventy-three of those 125 arguments were by women we coded as Asian, 28 were by women we coded as Black, and 24 were by women we coded as Latina.

[206] *See generally* TSEDALE M. MELAKU, YOU DON'T LOOK LIKE A LAWYER: BLACK WOMEN AND SYSTEMIC GENDERED RACISM 2 (2019) ("[T]he evidence demonstrates that, even if we, black women, *lean in* with confidence, an embossed invitation, and accomplished work in our hands, it certainly does not mean that we will acquire a seat at the proverbial table.").

[207] *See* DIVERSITY PILOTS INITIATIVE (2023) https://diversitypilots.org [https://perma.cc/S62Q-5BTB] ("We are a group of researchers that works with firms and organizations to advance diversity and inclusion in innovation by coupling our understanding of institutional details and dynamics associated with patenting, law firm advancement, and innovation processes with econometric and social science approaches.").

(37% women, 14% people of color). The same goes for women of color, who delivered 11.5% of government arguments in our dataset while comprising roughly 8% of all practicing lawyers in the United States.

Much like the pipeline problem invoked to explain the absence of women in patent law practice generally,[208] the work-life balance enjoyed by government attorneys is often invoked to explain why the workforce of government attorneys is more diverse than in the private sector.[209]

The work-life explanation undoubtedly has some weight. Balancing caregiving responsibilities with professional advancement at a law firm is difficult.[210] The predictable hours of government work can make that balance easier to strike, particularly for women (of all races),[211] and also for men of color.[212] But, like others studying employment diversity in the modern economy, we think our findings also relate to structural features of the workplace,[213] such as the nature of the work that the government attorneys have the opportunity to do, the systems of

[208] *See supra* Part I.A (casting doubt on that explanation).

[209] *See* Francis Mundin, *The Pros and Cons of Working as a Government Attorney in 2024*, LAWCROSSING (Apr. 4, 2024), https://www.lawcrossing.com/article/900049893/The-Pros-and-Cons-of-Working-as-a-Government-Attorney [https://perma.cc/F2LE-DRLN].

[210] Elizabeth Olson, *Law Firms Botch Parental Leave for Men, Families, Survey Says*, BLOOMBERG L. (May 11, 2021, 5:00 AM PDT), https://news.bloomberglaw.com/business-and-practice/law-firms-botch-parental-leave-for-men-families-survey-says [https://perma.cc/9SNU-Q2J6]; *see also* AM. BAR ASS'N, CAREGIVERS, *supra* note 9, at 3 ("Research has consistently shown that employed mothers across all professions and industries incur a 'motherhood penalty' in terms of their career opportunities, compensation, and advancement. In fact, it appears that the 'motherhood penalty' may be more pervasive in highly-skilled professions and jobs dominated by men that require long hours and constant availability." (footnote omitted)).

[211] *But cf.* Stephen J. Choi, Mitu Gulati & A.C. Pritchard, *Should I Stay or Should I Go? The Gender Gap for Securities and Exchange Commission Attorneys*, 62 J.L. & ECON. 427, 429 (2019) (finding that male attorneys at the Securities Exchange Commission received more complex, higher profile assignments than women, but were not paid more than women and that gender gaps did not correspond to childcare responsibilities).

[212] DOBBIN & KALEV, *supra* note 11, at 152 (noting that flexible-hour programs benefit men of color, suggesting that "the need for work-life balance extends beyond women, who used to be viewed as the prime beneficiaries of these programs").

[213] *See id.* at 11 ("Companies have been trying to fix inequality at work by fighting bias in the hearts, and actions, of individual managers. That has been a spectacular failure. It turns out to be more effective to focus on bias and discrimination *in systems* than in people." (emphasis added)).

compensation and advancement for government attorneys, and the culture of the government workplace as compared to private practice.

As for the nature of the work, a primary responsibility of a lawyer at the PTO Solicitor's Office (where most of the government attorneys in our dataset practice) is litigating — and arguing — patent appeals at the Federal Circuit.[214] Those sorts of high-level responsibilities are not as available in the private sector. At a law firm, associates and even junior partners — levels at which there are comparatively more women, people of color, and women of color[215] — might spend years writing briefs in appellate cases without presenting an oral argument.[216] At the PTO Solicitor's Office, by contrast, if a lawyer writes a brief, they expect to argue the case.[217]

In other words, do the work and you will present the argument, gaining the corresponding professional experience and advancement. Those cultural norms not only make the Solicitor Office's an attractive place to work, particularly for a lawyer searching for professional opportunities unavailable in the private sector,[218] they also mean that,

[214] *See* Megan M. La Belle, *Public Enforcement of Patent Law*, 96 B.U. L. REV. 1865, 1919 (2016).

[215] For instance, as of 2020, 26% of law firm associates were people of color, compared with 10% of partners. Similarly, 47% of associates were women, compared to 25% of partners. *See* NAT'L ASS'N OF LEGAL PROS., REPORT ON DIVERSITY IN U.S. LAW FIRMS 19, 26, 28 (2021), https://www.law.berkeley.edu/wp-content/uploads/2021/02/2020_NALP_Diversity_Report.pdf [https://perma.cc/QTH6-JHN4].

[216] For a similar story from a study of lawyer gender in litigation at the Delaware Chancery Court, see Afra Afsharipour & Matthew Jennejohn, *Gender and the Social Structure of Exclusion in U.S. Corporate Law*, 90 U. CHI. L. REV. 1819, 1825 (2023) ("[W]hile the percentage of women and men is nearly equal among associate ranks, men vastly outnumber women among partners. We find a similar pattern when we examine attorneys' network centrality: over time, far more men become highly connected lawyers in the network than women.").

[217] We learned this from conversations with lawyers who work at the Office or who worked there in the past.

[218] Evidence suggests that women, far more frequently than men, report missing out on business development opportunities, sponsorship, and desirable assignments. *E.g.*, ROBERTA D. LIEBENBERG & STEPHANIE A. SCHARF, WALKING OUT THE DOOR: THE FACTS FIGURES, AND FUTURE OF EXPERIENCED WOMEN LAWYERS IN PRIVATE PRACTICE 7-8 (2019). Women of color likewise report a lack of exposure to major clients and important assignments. *E.g.*, JOYCE STERLING & LINDA CHANOW, IN THEIR OWN WORDS: EXPERIENCED

unlike at law firms, the demographics of the lawyers presenting argument at the Federal Circuit will reflect the demographics of the Office as a whole.

A fourth and final finding of our study worth reiterating is that, by and large, win rates do not vary based on any identifiable demographic characteristic of the lawyer arguing the case.[219] This finding undercuts any claim that decisions by law firms and clients about which lawyers to promote and reward with an oral argument assignment in a patent case turn entirely on the lawyer's ability to succeed in the courtroom. Lawyers who deliver appellate oral arguments in patent cases win or lose on behalf of their clients at roughly the same rates, regardless of what they look like.

The only area where win rates differ is when the most frequent Federal Circuit advocates from the private sector ask the Federal Circuit to overturn a decision of a lower court or agency. Those lawyers win as patent case appellants over 40% of the time, compared to less than a quarter of the time for everyone else. Part of that disparity, as we discussed, may be driven by selection effects — frequent advocates challenging on appeal the rulings that are most likely to be overturned.[220] But, that cohort aside, appellate patent lawyers tend to win at roughly the same rates. So why, then, are private practice lawyers who argue most frequently before the Federal Circuit overwhelmingly white and male?

Our data suggest a complicated story in which becoming an elite appellate litigator is about more than winning and losing in the courtroom.[221] Accordingly, in the next and final section of the Article,

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WOMEN LAWYERS EXPLAIN WHY THEY ARE LEAVING THEIR LAW FIRMS AND THE PROFESSION 23 (2021).

[219] *See supra* Part III.E.

[220] *See supra* note 203.

[221] For a similar account in the context of multi-district litigation, see Elizabeth Chamblee Burch & Margaret S. Williams, *Repeat Players in Multidistrict Litigation: The Social Network*, 102 CORNELL L. REV. 1445, 1452 (2017) ("[T]he fact that the same players appear in the vast majority of these proceedings and design remarkably similar settlements that benefit themselves raises new questions about adequate representation and the need for strong case management in multidistrict litigation."). *But cf.* Andrew D. Bradt & D. Theodore Rave, *It's Good to Have the "Haves" on Your Side: A Defense of Repeat Players in Multidistrict Litigation*, 108 GEO. L.J. 73, 78 (2019) ("Repeat

we consider how to unearth the causes of exclusion and what steps lawyers and law firms might take to make the patent appellate bar — and law practice more generally — more inclusive.

B. Toward More Equitable Participation

We have shown that significant racial and gender inequalities persist among the private-sector lawyers arguing appellate patent cases despite no evidence that white lawyers or male lawyers (or white male lawyers) win at the Federal Circuit more frequently than lawyers of color or women lawyers.

Also, we see that the most frequent Federal Circuit advocates from the private sector get the most reversals from the Federal Circuit. Those lawyers are, no doubt, skilled at what they do. But it is hard to ignore that those lawyers also work at the biggest, most prestigious law firms in the world, where they command fees that only the wealthiest corporations can afford to pay.

The workforce of government attorneys arguing patent cases, by contrast, mirrors the population of lawyers as a whole in both gender and race representation. In that vein, to increase diversity and equity at the bar, the private sector could take cues from the government. As our data about the most frequent advocates indicates, oral argument experience correlates with wins, which translates into even more argument opportunities. Increasing diversity at the highest levels of the bar, then, means getting women and people of color a foot in the door — a first step to a regular stream of appearances.

At law firms, however, the path to argument and client management implicates a history of exclusion. As Rachel Arnow-Richman documents:

> In many firms, the first partner to bring a client to the firm is considered the "originator," entitling that individual to credit for all revenue subsequently generated from that client. This is true even if other lawyers perform work for or generate new business from that client. Given the historical exclusion of

players add value in large part by leveraging their experience and access to capital to level the playing field against defendants, who will almost always be repeat players, as will their teams of BigLaw attorneys.").

> women from the profession, this arrangement necessarily privileges men.[222]

Kerri Stone, through an extensive series of interviews, explores the unwritten rules of the originator system: the people who bring business in receive deference about who works for and has contact with clients as well as who will be a successor.[223] When those choices are coupled with stereotypes about agency, aggressiveness, and insider favoritism, the system of primarily white men getting access to clients and opportunities continues to thrive.[224]

To remake the legal profession, changes must occur at fundamental levels. U.S. businesses spend almost $8 billion annually on diversity efforts, with limited results.[225] A recent ABA study explains:

> The usual tools for increasing diversity — such as bias trainings — typically don't work. If legal employers truly want to attract talent from the full labor pool and provide a level playing field that gives every lawyer an equal opportunity to succeed, they need to try something different . . . If an employer lacks diversity, it is probably because subtle (and not-so-subtle) forms of bias are constantly playing out in everyday workplace interactions — in meetings, in assignments, in mentoring, in

[222] Rachel Arnow-Richman, *Beyond the Glass Ceiling: Panes of Equity Partnership*, 17 FIU L. REV. 753, 756 (2023) (reviewing KERRI LYNN STONE, PANES OF THE GLASS CEILING: THE UNSPOKEN BELIEFS BEHIND THE LAW'S FAILURE TO HELP WOMEN ACHIEVE PROFESSIONAL PARITY (2022)).

[223] KERRI LYNN STONE, PANES OF THE GLASS CEILING: THE UNSPOKEN BELIEFS BEHIND THE LAW'S FAILURE TO HELP WOMEN ACHIEVE PROFESSIONAL PARITY (2022).

[224] *See id.* at 105-30.

[225] JOAN C. WILLIAMS , REBECCA L. RAY, RACHEL M. KORN, ASMA GHANI, & RAAFIYA ALI KHAN, HUM. CAP. CENT., TRADITIONAL BIAS TRAINING DOESN'T WORK BIAS INTERRUPTERS DO 2 (2024), https://biasinterrupters.org/wp-content/uploads/2024/06/Traditional-Bias-Training-Doesnt-Work-Bias-Interrupters-Do.pdf [https://perma.cc/WLP9-63GN]. Indeed, some evidence suggests that legalistic diversity and harassment training programs may be *counterproductive*. *See* DOBBIN & KALEV, *supra* note 11, at 24-25 (finding that the programs *decreased* the proportion of women and people of color in managerial roles, citing other studies reaching a similar conclusion).

> compensation, and so on. The solution is not to "fix the women" *but to fix the business systems*.[226]

As that ABA report on "interrupting bias" suggests, to really make progress with diversity, reformers must focus on the transmission of bias and the structural causes of disadvantage and exclusion.[227] Law firms can, for instance, use concrete, objective metrics to track the effects of diversity efforts, to ensure promoting diversity is rewarded in performance reviews, and to ensure that no discrete demographic group is being treated differently in assignments, evaluation, and compensation.[228] Written, transparent guidelines for determining origination credit and client inheritance could help ensure that retiring white male partners "do not simply bequeath their clients to their [white] male protégés."[229] Relational systems, like mentoring arrangements,[230] or, as the ABA report emphasizes, "sponsorships,"[231] are also important and should play a role in the performance evaluation and compensation of senior lawyers. In particular, those with power in the current system, namely white men, should be encouraged to mentor women lawyers and lawyers of color and be rewarded for doing so.[232]

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[226] AM. BAR. ASS'N, INTERRUPTING BIAS, *supra* note 28, at 68 (emphasis added).

[227] *Id.* at 6, 12. *Accord* Afsharipour & Jennejohn, *supra* note 216, at 1879 ("Our data cast doubt on whether two decades of diversity trainings, as currently designed, have proven effective in enhancing inclusion at law firms. The network approach suggests that more structural reforms are necessary.").

[228] AM. BAR. ASS'N, INTERRUPTING BIAS, *supra* note 28, at 2.

[229] AM. BAR ASS'N, CAREGIVERS, *supra* note 9, at 130.

[230] *See* DEO, *supra* note 25, at 152-54 (discussing the value of mentorship for women of color in legal academia). For a sketch of what effective corporate mentoring programs look like, see DOBBIN & KALEV, *supra* note 11, at 87-92 ("Three simple steps can help firms democratize mentoring: establish formal programs, match mentors and protégés based on interests [not race or gender], and open up mentoring at all levels.").

[231] AM. BAR. ASS'N, INTERRUPTING BIAS, *supra* note 28, at 48. *Cf.* DOBBIN & KALEV, *supra* note 11, at 111 (urging caution about the value of sponsorship programs because they are often restricted to "high-potential" employees, who may already *have* supporters).

[232] *See* Afsharipour & Jennejohn, *supra* note 216, at 1882 (discussing the benefits of cross-gender mentoring to men, women, and the organizations that employ them). Encouraging those sorts of relationships, it's worth noting, can be a particularly fraught task since the #MeToo movement spotlighted pervasive gender-based harassment in large organizations, including law firms. *See, e.g.*, Anthony Michael Kreis, *Defensive Glass Ceilings*, 88 GEO. WASH. L. REV. 147, 151 (2020) ("Fearing the possibility of

For now, though, climbing the ranks of a large firm demands assimilation, competition, and, importantly, time.[233] The commitment of time is a double burden. Women and particularly women of color already spend disproportionate time seeking to gain acceptance in a system too often presented as natural or only merit based.[234]

Broadening the population of lawyers who routinely engage in appellate patent practice will mean disrupting the norms, behaviors, and — crucially — financial incentives that exclude and undermine outsiders in favor of the status quo.[235] Rather than thinking of diversity as something to add *to* law practice, diversity and inclusion should be thought of as outcomes of a transformed profession[236] with realigned financial incentives and cultural norms.[237]

unsubstantiated sexual harassment claims, spousal jealousy, the inability to exercise self-control, or pressure from outside forces like insurers, men have [since the inception of the #MeToo movement] limited women's employment opportunities or subjected women to second-class rules of workplace engagement.")

[233] Tsedale M. Melaku, *Why Women and People of Color in Law Still Hear "You Don't Look Like a Lawyer"*, HARV. BUS. REV. (Aug. 7, 2019), https://hbr.org/2019/08/why-women-and-people-of-color-in-law-still-hear-you-dont-look-like-a-lawyer [https://perma.cc/8LPS-F7P9].

[234] *See id.* (discussing the "inclusion tax": "time, money, and mental and emotional energy" women and women of color must expend "to gain entry to and acceptance [in] traditionally white and male institutional spaces"); *see also* Brooke D. Coleman, *A Legal Fempire?: Women in Complex Civil Litigation*, 93 IND. L.J. 617, 620 (2018) ("Complex litigation is a highly competitive and elite practice area, and one for which exclusivity creates a particularly challenging setting for gender equity.").

[235] Williams, *Beyond Sex-Plus*, *supra* note 93, at 3 ("Black women are subject to deeply entrenched forces of systemic racism and sexism at the structural level and at the interpersonal level. They also face unique stereotypes and biases that neither white women nor Black men face. This leads Black women to encounter high rates of discrimination and harassment in the workplace that can take many forms.").

[236] *Cf.* Abreu & Greenstein, *supra* note 69, at 6 (suggesting that diversity in tax law practice could be increased through greater recognition that "[t]he tax system . . . is not just a revenue-raising machine" but that it "is actually replete with social values").

[237] *See generally How Does Origination Credit Impact Diversity in the Business of Law?*, BURFORD (Mar. 29, 2021), https://www.burfordcapital.com/insights-news-events/insights-research/how-does-origination-credit-impact-diversity-in-the-business-of-law [https://perma.cc/RJU2-54EM] (discussing how origination credits, *see supra* note 222 and accompanying text, "contribute[] significantly to the gender and racial gap in law, by preventing female and racially diverse lawyers from receiving fair compensation and advancing in their careers").

Lastly, the Federal Circuit could play a role in norm disrupting to increase the diversity of the bar that argues patent cases before it. Some Federal Circuit judges have acknowledged concerns about the skewed demographics of the patent bar.[238] Like some lower courts,[239] and even the PTO's Patent Trial and Appeal Board,[240] the court could formally announce a preference for arguments by lawyers of color, women lawyers, or, perhaps most realistically, lawyers who have not yet had a chance (or many chances) to argue before the court.[241] The court could give more argument time to parties who put those lawyers forward, and it could also relax its restrictions on the number of lawyers from the same firm who may argue a single case.[242] The appellate patent bar is a tight-knit community, as evidenced by the fact that nearly a quarter of all patent case arguments are delivered by a mere ninety lawyers.[243]

[238] *See, e.g.*, Andrew Kragie, *Perkins Coie IP Atty Confirmed as Fed. Circ.'s 1st Black Judge*, LAW360 (July 19, 2021, 7:37 PM), https://www.law360.com/articles/1403597/perkins-coie-ip-atty-confirmed-as-fed-circ-s-1st-black-judge [https://perma.cc/Q96X-PN95] (Judge Cunningham, describing her time clerking on the Federal Circuit in 2001 and 2002: "[O]ne thing that struck [me] was the 'homogenous' nature of the court's judges: all white with only two women"); Kathleen M. O'Malley, *The Intensifying National Interest in Patent Litigation*, MARQ. LAW INTELL. PROP. L. REV. 1, 2 (2015) (noting that Judge Helen Nies, the first woman judge on the Federal Circuit, "would be pleased to see one-third of the seats on the current court filled by women — and to see how many talented young women are now entering the intellectual property (IP) field").

[239] *See* Kimberly A. Jolson, *The Power of Suggestion: Can a Judicial Standing Order Disrupt a Norm?*, 89 U. CIN. L. REV. 455, 456-57 (2021).

[240] *Legal Experience and Advancement Program* (*LEAP*), U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/leap [https://perma.cc/YEL4-XYL5].

[241] For one example of a party asking the Federal Circuit to place a case on its oral argument calendar (rather than deciding the case on the briefs alone) for the specific reason that the case would be argued by a lawyer who had not previously argued a Federal Circuit case (and identified as a woman), see Appellants' Motion to Reconsider the Order Canceling Oral Argument and to Reschedule Oral Argument for a Later Date at 1, *In re* Publicover, 813 F. App'x 527 (Fed. Cir. 2020) (No. 19–1883). The Federal Circuit granted the motion. *See* Perry Cooper, *Google, Perkins Coie Get Federal Circuit Argument Reinstated*, BLOOMBERG L. (Apr. 22, 2020), https://www.bloomberglaw.com/document/X7U03JUO000000 [https://perma.cc/2T5U-CHRT].

[242] *See* FED. CIR. R. 34(e)(2) ("[N]o more than one (1) counsel may argue on behalf of each party or on behalf of parties represented by the same counsel or by counsel from the same firm.").

[243] *See supra* Part III.D.

Federal Circuit judges have a role to play in shifting the culture toward one of inclusion because they are in the best position to shape the attitudes and practices of big firm, "elite" lawyers who exercise a lot of power in the current system.

CONCLUSION

As much as six Supreme Court justices might wish it to be, we do not live in a colorblind society.[244] Ignoring the stark racial and gender disparities in elite positions will not make those disparities go away.

One limitation of our study is that we cannot be sure about the root causes of the underrepresentation we bring to light. But, given the ongoing legal and political challenges to efforts to remedy — or even to talk about[245] — the effects of the racial and gender injustice that have long defined this country, we join scholars and practitioners who want the legal profession to be more inclusive and able to reckon with practices of exclusion, whatever their cause. Working toward that reckoning, as we have tried to do modestly in this Article, is the responsibility of future generations of lawyers, and it is vital to the integrity and the future of the legal system.

[244] *Cf.* Students for Fair Admissions, Inc. v. President and Fellows of Harvard Coll., 600 U.S. 181, 260 (2023) (Thomas, J., concurring) (arguing that the only way to *avoid* having a "caste-ridden society steeped in raced-based discrimination" is to outlaw affirmative action).

[245] Jennifer Schuessler, *Scholarly Groups Condemn Laws Limiting Teaching on Race*, N.Y. TIMES, https://www.nytimes.com/2021/06/16/arts/critical-race-theory-scholars.html (last updated Nov. 8, 2021).