

POLITICS, IDENTITY, AND CLASS CERTIFICATION ON THE U.S. COURTS OF APPEALS

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This Article draws on novel data and presents the results of the first empirical analysis of how potentially salient characteristics of Court of Appeals judges influence class certification under Rule 23 of the Federal Rules of Civil Procedure. We find that the ideological composition of the panel (measured by the party of the appointing president) has a very strong association with certification outcomes, with all-Democratic panels having dramatically higher rates of procertification outcomes than all-Republican panels—nearly triple in about the past twenty years. We also find that the presence of one African American on a panel, and the presence of two women (but not one), is associated with procertification outcomes.

Our results show that, contrary to conventional wisdom in scholarship on diversity on the Courts of Appeals, the impact of diversity extends beyond conceptions of “women’s issues” or “minority issues.” The consequences of gender and racial diversity on the bench, through application and elaboration of certification law, radiate widely across the legal landscape, influencing implementation in such areas as consumer, securities, labor and employment, antitrust, insurance, product liability, environmental, and many other areas of law. In considering possible explanations for our findings on the procertification preferences of women and African Americans, we note that class action doctrine, as transsubstantive procedural law, traverses many policy areas. As strategic actors, it would be rational for judges to take into consideration how class-certification doctrine in a case that does not implicate issues on which they have distinctive preferences might affect certification in cases that do. Alternatively, or in addition, our results may be the first evidence that transsubstantive procedural law affecting access to justice is itself a policy domain in which women and African Americans have distinctive preferences. In either case, the results highlight the importance of exploring the effects of diversity on transsubstantive procedural law more generally.

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Our findings on gender panel effects in particular are novel in the literature on panel effects and the literature on gender and judging. Past work focusing on substantive antidiscrimination law found that one woman can influence the votes of men in the majority (mirroring what we find with respect to African Americans in class-certification decisions). These results allowed for optimism that the panel structure—which threatens to dilute the influence of underrepresented groups on the bench because they are infrequently in the panel majority—actually facilitates minority influence, whether through deliberation, cue taking, bargaining, or some other mechanism.

Our gender results are quite different and normatively troubling. We observe that women have substantially more procertification preferences based on outcomes when they are in the majority. However, panels with one woman are not more likely to yield procertification outcomes. Panels with women in the majority occur at sharply lower rates than women’s percentage of judgeships, and thus certification doctrine underrepresents their preferences relative to their share of judgeships and overrepresents those of male judges.

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INTRODUCTION

This Article explores the relationship between the ideology, gender, and race of U.S. Court of Appeals judges and decisions addressing class certification under Rule 23 of the Federal Rules of Civil Procedure. Political conflict over federal judicial nominees has become a familiar feature of the American political landscape. Presidents have increasingly come to regard federal judges with aligned preferences as a critical component of the infrastructure for elaborating and implementing their national political and policy agendas. Correspondingly, presidential administrations have paid increasing attention to scrutinizing potential nominees in the hopes of identifying those with preferences most likely to advance administration goals. Political opponents of presidential administrations are, of course, attentive to the same concerns, and it seems that the harder presidents work to nominate ideologically aligned candidates, the harder opponents work to defeat them, often characterizing them as ideological extremists. The focus of this battle extends beyond conventional markers of ideology and encompasses issues of gender and racial diversity, with some critics attacking presidential administrations for staffing the federal courts with judges that fail to reflect the country's diversity.

The concern for gender and racial diversity on the federal bench is often tied to issues of representation. Pitkin's classic distinction between descriptive and substantive representation is useful for clarifying two conceptions of representation that are relevant to racial and gender diversity on the bench.¹ An institution of governance is descriptively representative to the extent that it mirrors, in salient respects, the composition of the community that it governs. Substantive representation, in contrast, is concerned with whether governmental actors, in their decision making, actually represent the distinctive preferences or interests of a community that they are associated with.²

Advocates of increasing, and scholars studying, the representation of women and members of racial minorities on the bench have long been concerned with both forms of representation. One goal of increasing diversity on the bench is to create a bench that descriptively reflects the country's diversity, which itself can promote the judiciary's appearance of impartiality and enhance its democratic legitimacy.³ Another purpose concerns legal substance. Some believe that women and members of racial minorities have different preferences that are potentially consequential to case outcomes, and in particular that they are more sensitive than white men to issues of discrimination

1. See HANNA FENICHEL PITKIN, *THE CONCEPT OF REPRESENTATION* (1967).

2. *Id.* at 80, 184.

3. See SUSAN B. HAIRE & LAURA P. MOYER, *DIVERSITY MATTERS: JUDICIAL POLICY MAKING IN THE U.S. COURTS OF APPEALS* (2015); Allison P. Harris & Maya Sen, *Bias and Judging*, 22 ANN. REV. POL. SCI. 241, 247 (2019); Susan Moloney Smith, Comment, *Diversifying the Judiciary: The Influence of Gender and Race on Judging*, 28 U. RICH. L. REV. 179, 198 (1994); Carl Tobias, Commentary, *The Gender Gap on the Federal Bench*, 19 HOFSTRA L. REV. 171, 177 (1990).

and inequality in their substantive decision making.⁴ The primary reason given for this view is that women and members of racial minorities are more likely to have seen or been subjected to discrimination, and these distinctive life experiences make the judges more likely to believe a plaintiff's evidence of discrimination and to empathize with such plaintiffs.⁵

Debates over gender and racial diversity in federal judicial appointments have escalated in recent years. In the first two years of his administration, Trump's judicial appointments were 92% white and 76% male.⁶ One recent study described where this places Trump's appointments in historical context:

Trump has appointed white men in numbers not seen in nearly three decades, reversing a four-decade trend across both Democratic and Republican administrations of increasing the diversity of judges appointed to the federal bench over time. Among Democratic presidents, the share of white males appointed to the bench shrank from 66 percent during Carter's Administration, to 53 percent during Clinton's administration, and they represented a mere 36 percent of Obama's appointees to the bench. Republican presidents have appointed more white males and fewer diverse judges to the bench compared to Democratic presidents. Until now, however, they too evidenced a trend towards greater judicial diversity with the share of white male judges appointed by Reagan at 86 percent, but falling to 73 percent under Bush I and falling yet again under Bush II to 67 percent. Trump has reversed this decade-long trend by appointing approximately 70 percent white male judges to the federal bench.⁷

Underpinning battles over the ideological, gender, and racial complexion of the federal courts as it bears on substantive representation is an empirical assumption: the ideology and identity of federal judges matter to how they decide some cases. It is no wonder, then, that the relationship between judge characteristics and judicial decision making is among the largest fields of inquiry in the social scientific study of courts. Scholars have done substantial empirical work on the role of ideology, gender, and race in judicial decision

4. See HAIRE & MOYER, *supra* note 3, at 6, 13–114; Theresa M. Beiner, *What Will Diversity on the Bench Mean for Justice?*, 6 MICH. J. GENDER & L. 113 (1999); Christina L. Boyd, Lee Epstein & Andrew D. Martin, *Untangling the Causal Effects of Sex on Judging*, 54 AM. J. POL. SCI. 389 (2010); Sherrilyn A. Ifill, *Racial Diversity on the Bench: Beyond Role Models and Public Confidence*, 57 WASH. & LEE L. REV. 405 (2000).

5. See, e.g., HAIRE & MOYER, *supra* note 3, at 32, 48; Boyd et al., *supra* note 4; Ifill, *supra* note 4; Joy Milligan, *Pluralism in America: Why Judicial Diversity Improves Legal Decisions About Political Morality*, 81 N.Y.U. L. REV. 1206 (2006).

6. Stacy Hawkins, *Trump's Dangerous Judicial Legacy*, 67 UCLA L. REV. DISCOURSE 20, 30 (2019). As of August 1, 2020, fifty-three of Trump's nominees to the Courts of Appeals had been confirmed, of whom 85% were white and 79% were men. There are no African Americans in this group. One of them is Hispanic, and seven are Asian-Americans. *Federal Judges Nominated by Donald Trump*, BALLOTPEdia, https://ballotpedia.org/Federal_judges_nominated_by_Donald_Trump [<https://perma.cc/H7TS-CFAX>].

7. Hawkins, *supra* note 6, at 31 (citations omitted).

making on the U.S. Courts of Appeals.⁸ These studies have focused on salient public law issues, including employment discrimination, sexual harassment, voting rights, environmental law, affirmative action, abortion, capital punishment, campaign finance, and federalism cases, among others.

However, the field has largely ignored procedural law, including class actions. Indeed, we have not been able to find a single empirical Court of Appeals study seeking to evaluate the relationship between these judge characteristics—or any other judge characteristics, or any other variables at all—and decisions on class certification.

This is unfortunate because intuitions about judicial behavior, especially as they relate to diversity, often provide a poor guide to reality. For example, Court of Appeals studies have found no differences in decision making by men and women in abortion and sexual harassment cases,⁹ or whites and members of racial minorities in employment discrimination cases,¹⁰ or Republican and Democratic appointees in cases addressing criminal appeals, governmental takings of private property, and Commerce Clause challenges to national legislation.¹¹

Scholarly neglect of the possible influence of ideology is not surprising, although it is regrettable, regarding procedural law in general. It is more puzzling with respect to class actions in particular, which have long been the subject of ideologically inflected debate. Class aggregation under Rule 23 can be a vehicle for enormous regulatory power. Certification has the capacity to transform a wage or consumer grievance over modest economic stakes that would never be litigated individually into a claim for massive damages when litigated on behalf of a class. In addition to providing the promise of a remedy for large groups of persons when none would otherwise be practically available, the prospect of certification can be an important feature of the regulatory environment, shaping the behavior of defendants in favor of compliance.

Our prior work on the Supreme Court's decisions interpreting Federal Rules that implicate private enforcement (including Rule 23) shows that beginning in 1995 the justices' votes in such cases were more strongly associated

8. See, e.g., HAIRE & MOYER, *supra* note 3; Boyd et al., *supra* note 4; Adam B. Cox & Thomas J. Miles, *Judging the Voting Rights Act*, 108 COLUM. L. REV. 1 (2008); Frank B. Cross & Emerson H. Tiller, *Essay, Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155 (1998); Sean Farhang & Gregory Wawro, *Institutional Dynamics on the U.S. Court of Appeals: Minority Representation Under Panel Decision Making*, 20 J.L. ECON. & ORG. 299 (2004); Jonathan P. Kastellec, *Racial Diversity and Judicial Influence on Appellate Courts*, 57 AM. J. POL. SCI. 167 (2013); Jennifer L. Peresie, *Note, Female Judges Matter: Gender and Collegial Decisionmaking in the Federal Appellate Courts*, 114 YALE L.J. 1759 (2005); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997).

9. See Boyd et al., *supra* note 4.

10. See Farhang & Wawro, *supra* note 8; Peresie, *supra* note 8.

11. See CASS R. SUNSTEIN, DAVID SCHKADE, LISA M. ELLMAN & ANDRES SAWICKI, *ARE JUDGES POLITICAL?: AN EMPIRICAL ANALYSIS OF THE FEDERAL JUDICIARY* 149 (2006).

with ideology than they were in merits votes.¹² Particularly given increasing attention to ideology in lower federal court appointments in recent decades, our goals in collecting comprehensive data on class action decisions by the Courts of Appeals included determining whether ideology plays a similar role at that level.

The neglect of gender and race as possible influences on class-certification decisions may reflect the apparent consensus that has emerged in the literature on the Courts of Appeals that judges' gender and race are associated with variation in preferences only in a narrow band of cases directly and explicitly implicating discrimination and inequality.¹³ Our prior work also gave cause to question that assumption as to procedural law (like Rule 23) that affects access to justice and does so across substantive domains, including in particular discrimination and inequality.¹⁴

In Part I, we briefly review the literature on Court of Appeals decision making that we build on. We emphasize two points. First, the literature shows that when Court of Appeals judges' party, gender, and race are associated with votes, their primary explanatory power is at the panel level, meaning that the composition of the panel often explains more variation in judges' votes than their own individual characteristics. The key point is that Court of Appeals judges' preferences (measured by characteristics) may influence outcomes by the way they influence the votes of copanelists.

Second, studies focusing on discrete types of civil rights claims show that panels with one woman or African American are more likely to produce pro-civil rights outcomes as compared to panels with all men or all whites, providing systematic evidence that minority-group judges may influence outcomes even when they are in the panel minority. By "minority group" we refer to groups of judges that are a numerical minority on the U.S. Courts of Appeals, such as women and nonwhites, regardless of their numbers in the general population. We use the phrase "panel minority" to refer to a minority posi-

12. In order to reach this conclusion, we compared certification votes to merits votes in the same policy areas that underlay our certification cases. See STEPHEN B. BURBANK & SEAN FARHANG, RIGHTS AND RETRENCHMENT: THE COUNTERREVOLUTION AGAINST FEDERAL LITIGATION 170–80 (2017); see also Stephen B. Burbank & Sean Farhang, *Class Actions and the Counterrevolution Against Federal Litigation*, 165 U. PA. L. REV. 1495, 1526–28 (2017).

13. See *infra* notes 24, 27–30 and accompanying text; see also Peresie, *supra* note 8, at 1768 n.36 ("Although gender differences may exist in judges' views of procedural doctrines, procedural rulings are less likely to be affected by a judge's gender.").

14. Recognition of this reality did, however, cause two scholars to assimilate some procedural rulings to merits rulings. See Sepehr Shahshahani & Lawrence J. Liu, *Religion and Judging on the Federal Courts of Appeals*, 14 J. EMPIRICAL LEGAL STUD. 716, 723 (2017) ("Our object is to gauge the attitude of judges to religious liberties claims, and there is no reason to think that this attitude becomes uninteresting or entirely different when the issue before the court is procedural. Quite the opposite, we know that judges use procedural doctrines to achieve substantive outcomes they desire." (citation omitted)). This study, however, provided no separate analysis of procedural issues, and thus it does not allow inferences about whether their outcomes were associated with judge characteristics.

tion on a panel that has divided preferences, regardless of whether the judge is in a majority or minority group on the circuit.

In Part II, we review the theoretical accounts of appellate decision making that provide possible explanations for panel dynamics when judges in the panel minority in terms of preferences do and do not affect outcomes. This theoretical literature is built on the empirical fact that Court of Appeals panels are overwhelmingly unanimous. On one account, unanimity may be driven by dissent avoidance by panel-minority judges who disagree with panel majorities but do not dissent because of workload pressures, strong norms against dissent, or the loneliness of dissent. These factors could lead to suppression of dissents on panels on which there is sincere disagreement, and the panel-majority view prevails without being influenced by the panel minority.

Alternatively, unanimity may be driven by panel minorities not dissenting because they *are* able to affect decisions. Mechanisms of influence include deliberation and bargaining, which allow panel minorities to change the preferences and/or votes of panel majorities. As applied to minority-group judges, this view yields more positive normative implications than if they were suppressing dissents. It would allow minority-group preferences, when they differ systematically from majority-group preferences, to shape the application and development of law even when they are in the panel minority. As already noted, multiple studies focused on civil rights cases have found that a single woman or African American can influence the votes of men and whites.

Part III contains our core contributions. We rely on an original and comprehensive dataset of Court of Appeals panel decisions addressing whether or not to certify a class under Rule 23 that spans 1967 to 2017. We find a very strong association between the political party of the appointing president and certification votes and outcomes, with all-Democratic panels yielding pro-certification outcomes at nearly triple the rate of all-Republican panels over about the past twenty years. Comparing the descriptive levels of ideological voting in our certification data to prior scholarship focused on substantive law, we show that the role of ideology in certification is comparable in size to its role in cases presenting some of the most ideologically contentious issues of our day, including, for example, capital punishment, employment discrimination, desegregation, and abortion. If the judicial-behavior literature's neglect of procedure in general, and class certification in particular, reflects an assumption that the effects of judicial ideology do not reach into this domain on the Courts of Appeals, we show that assumption to be false.

This Part goes on to show that racial and gender diversity on panels is also consequential to certification, although we discern important differences between the race and gender dynamics on panels. The presence of a single African American on a panel, relative to none, increases the probability that the panel will yield a pro-certification outcome. This result is consistent with the race and gender panel-effects studies in which a single African American or woman on a panel is associated with increases in the probability of pro-civil rights outcomes. We have an insufficient number of cases with two African Americans on a panel to assess the probability of pro-certification outcomes on such panels.

In notable contrast, the presence of a single woman on a panel, relative to none, is not associated with an increased probability of a procertification outcome. This does not mean, however, that women do not have more procertification preferences. When two women serve on a panel, forming a majority, its rate of procertification outcomes is much larger than on panels with three men. This result departs sharply from conventional wisdom in the Court of Appeals literature that when women or members of racial minorities have different preferences than men and whites, some pathway (or pathways) allows them to influence outcomes when in the minority.

We regard this result as normatively troubling. As a function of the laws of probability, minority-group judges on a circuit will be in the majority on panels at rates far lower than their fraction of judgeships. The share of panels with women in the majority in our data is about half the share of individual votes cast by women. The majoritarian character of gender panel dynamics in certification decisions—where women in the panel minority do not influence the outcome votes of men in the majority, and women's impact emerges only when they are in the majority—materially dilutes women's influence on certification relative to their numbers on the bench, a bench that already underrepresents women.

These results highlight some important limits of Court of Appeals scholarship which concludes that, in many discrete policy areas, women and members of racial minorities do not have different preferences than men and whites. The inferences in these studies (every one that we have found) were drawn from empirical models in which the individual-level votes of minority-group judges were not different from majority-group judges and/or the presence of one minority-group judge did not produce distinguishable outcomes relative to all-majority group panels. However, the researchers did not separately evaluate panels with a *majority* of minority-group judges and/or lacked a sufficient number of such cases to support meaningful inferences about such panels.

Earlier studies appear to have assumed that, if minority-group judges had different preferences than majority-group judges, they would affect minority-group judge votes, or case outcomes, rather than being suppressed by majoritarian voting dynamics (or some other mechanism). Our gender results show that this assumption is sometimes false, and thus differences in minority-group judges' preferences cannot be rejected without separately examining cases in which they are in the majority. Unfortunately, meaningful analysis for that purpose requires a lot of data.

Neither our data nor prior panel-effects scholarship allow us to identify the reasons for the different preferences of women and African Americans as to class certification or, in the case of gender, why two women on a panel as opposed to one are associated with higher rates of procertification voting and outcomes. We do, however, offer suggestions on both questions as a possible guide for additional research.

As transsubstantive procedural law, the Federal Rules of Civil Procedure apply across substantive domains and can enable or constrict access to justice. A controlling interpretation of a Federal Rule in an antitrust case, for exam-

ple, will carry over into its application in a voting rights case. One important insight of this Article is that the transsubstantive nature of the Federal Rules can also convey the substantive effects of diversity across the landscape of American regulatory law. Court of Appeals judges understand that the Federal Rules are transsubstantive, as are the effects of some Federal Rules (importantly including Rule 23) on the enforcement of substantive law. As strategic actors, it would be rational for them to take into consideration how class-certification doctrine in a case that does not implicate issues on which they have strong preferences might affect certification in cases that do. Alternatively, or in addition, our results may be the first evidence that transsubstantive procedural law affecting access to justice is itself a policy domain in which women and African Americans have distinctive preferences.

Our suggestions regarding mechanisms that may help to explain why two women on a panel, but not one, are associated with higher rates of procertification voting and outcomes are more speculative and tentative. One explanation is familiar in the literature on panel effects. Men may simply care intensely about certification and have views so entrenched that their votes cannot be influenced and majoritarian dynamics prevail. Yet, we observe that a single African American is associated with elevating the rate of procertification outcomes. This leads us to consider recent scholarship on the gender gap in political discussions and decision making, which suggests some disquieting possibilities. If the dynamics identified by this research are at play, one possibility is that a woman in the minority who advocates for a preferred outcome is less successful because, as a panel minority in a substantive domain that does not elicit gender-based deference, she is regarded as less authoritative and influential. Another is that the reinforcement of another woman increases her propensity to advocate preferences that differ systematically from those of her male colleagues in areas without obvious gender salience.

I. PANEL EFFECTS ON THE COURT OF APPEALS

From the dawn of the judicial-behavior literature until the late 1990s, judicial-politics scholars studied such questions on appellate courts by evaluating, for example, whether a judge's presumed ideological preferences (as proxied by the party of the appointing president), race, or gender was associated with her votes in cases thought to have high policy salience. These studies were based largely on the attitudinal model of decision making.¹⁵ The attitudinal model is oriented to explaining judicial decision making based on "each judge's political ideology and the identity of the parties."¹⁶ This individualist orientation emphasizes the explanatory power of each judge's sincere preferences independently of strategic institutional considerations or of interactions with colleagues.

15. See JEFFREY A. SEGAL & HAROLD J. SPAETH, *THE SUPREME COURT AND THE ATTITUDINAL MODEL* (1993).

16. Frank B. Cross, *Political Science and the New Legal Realism: A Case of Unfortunate Interdisciplinary Ignorance*, 92 NW. U. L. REV. 251, 265 (1997).

Beginning with landmark studies by Revesz¹⁷ and Cross and Tiller,¹⁸ scholars discovered that the votes of judges on three-judge Court of Appeals panels in many salient policy areas are associated with the identity characteristics of their panel colleagues. These initial studies found that Court of Appeals judges' votes were influenced by the party of the appointing president of other judges on the panel.¹⁹ These insights into panel dynamics were then extended to work on the influence of judges' gender and race. A number of studies found that in employment discrimination cases, men serving on three-judge Court of Appeals panels with one woman were more likely to rule for the plaintiff than men serving on panels with two other men.²⁰ Similarly, one study found that in voting rights cases whites on an appellate panel were more likely to vote in favor of liability when sitting with one member of a racial minority,²¹ and another found that in affirmative action cases whites were more likely to vote in the pro-affirmative action direction when sitting with one African American on the panel.²²

In the next section, when outlining a theoretical framework for understanding potential panel dynamics in the face of disagreement, we assume that in some areas of law systematic differences exist in preferences across groups of Court of Appeals judges, such as Democratic versus Republican appointees, whites versus nonwhites (or other racial subsets), or men versus women. We make this stylized assumption because it is the purpose of the framework to help understand the processes through which differences in preferences on panels are associated with legal outcomes, including differences in preferences associated with judges' identity characteristics such as race and gender. By assuming that judges' race and gender may be associated with their views of the proper disposition of cases in some fields of law, we do not indulge the facile notion that women or racial minority judges have homogeneous preferences. We do not believe that there is a monolithic women's perspective, or racial minority perspective, among judges. We do believe, however, that in some domains of law race and gender may be one constitutive element of a judge's views. The same is true of ideology.²³

17. Revesz, *supra* note 8.

18. Cross & Tiller, *supra* note 8.

19. See FRANK B. CROSS, DECISION MAKING IN THE U.S. COURTS OF APPEALS (2007); SUNSTEIN ET AL., *supra* note 11.

20. See Boyd et al., *supra* note 4; Farhang & Wawro, *supra* note 8; Peresie, *supra* note 8.

21. Cox & Miles, *supra* note 8, at 45.

22. See Kastellec, *supra* note 8. A recent study focusing on judges' religion, however, shows that panel effects will not always be present when there are detectable individual-level differences in preferences across groups. The study found that, although Jewish judges on the U.S. Courts of Appeals were more likely to rule for the plaintiff in Establishment Clause cases, the votes of non-Jewish colleagues on the panel were not affected. See Shahshahani & Liu, *supra* note 14.

23. See BURBANK & FARHANG, *supra* note 12, at 149–50 (“To attribute the Court’s decisions exclusively to the ideological preferences of the justices, however, would neglect ‘the messiness of lived experience’ . . . which teaches that judges . . . make decisions based on a number of

The social scientific evidence relied on throughout this Article provides support for this view. Yet, as previously noted, research on the U.S. Courts of Appeals civil docket that finds variation along gender or racial lines has clustered heavily in areas relating to discrimination and inequality, and such variation has sometimes been absent even in those areas.²⁴ In Boyd, Epstein, and Martin's widely cited study on gender, they undertake discrete analyses of the association of Court of Appeals judges' gender and their votes in thirteen separate policy areas.²⁵ They report that women vote differently, and influence men, in only one—gender-based employment discrimination claims.²⁶

They find that women do not vote differently than men in numerous areas that have no explicit gender salience and do not explicitly implicate issues of discrimination, such as campaign finance, federalism, piercing the corporate veil, Takings Clause, and environmental cases. Perhaps more surprisingly to some observers, they also find that women do not vote differently than men in some areas that *do* implicate gender and discrimination, including abortion, sexual harassment, and affirmative action. Ultimately, their interpretation is that women vote differently, and influence men, in domains in which they “possess unique and valuable information emanating from shared

considerations, including the law as they understand it.” (quoting Stephen B. Burbank, *On the Study of Judicial Behaviors: Of Law, Politics, Science, and Humility*, in *WHAT'S LAW GOT TO DO WITH IT?: WHAT JUDGES DO, WHY THEY DO IT, AND WHAT'S AT STAKE* 41, 53 (Charles Gardner Geyh ed., 2011)); Pauline T. Kim, *Deliberation and Strategy on the United States Courts of Appeals: An Empirical Exploration of Panel Effects*, 157 U. PA. L. REV. 1319, 1322 n.11 (2009) (“The fact that judges' votes correlate with party affiliation does not mean that they are not following legal doctrine. Legal rules are inevitably ‘open textured,’ allowing for the exercise of judgment. In those areas where legal discretion exists, judges may pursue policy goals without necessarily violating legal norms.” (quoting Pauline T. Kim, *Lower Court Discretion*, 82 N.Y.U. L. REV. 383, 410 (2007))).

24. See HAIRE & MOYER, *supra* note 3, at 28–32 (finding that African Americans do not vote more liberally than whites on the Courts of Appeals when data is pooled over many policy areas, but they do in employment discrimination cases if the data is restricted to claims based upon race, and (weakly) in criminal cases); Cox & Miles, *supra* note 8, at 30, 43 (finding that a judge's race, but not gender, is associated with higher likelihood of voting in favor of liability in voting rights cases on the U.S. Courts of Appeals); Farhang & Wawro, *supra* note 8, at 321 (finding that judge's gender, but not race, is associated with more liberal voting and outcomes in employment discrimination claims on the U.S. Courts of Appeals); Kastellec, *supra* note 8, at 175 (finding that a judge's race, but not gender, is associated with higher likelihood of voting in favor of affirmative action programs on the U.S. Courts of Appeals); Peresie, *supra* note 8, at 1774, 1776 (same); Gregory C. Sisk, Michael Heise & Andrew P. Morris, *Searching for the Soul of Judicial Decisionmaking: An Empirical Study of Religious Freedom Decisions*, 65 OHIO ST. L.J. 491, 595–96 (2004) (finding that a judge's race, but not gender, is associated with higher likelihood of voting in favor of plaintiffs alleging religious discrimination on the U.S. Courts of Appeals).

25. Boyd et al., *supra* note 4, at 400–06.

26. Several other studies find that women are more pro-plaintiff in adjudicating employment discrimination claims in general, not just gender-based claims. See Farhang & Wawro, *supra* note 8; Peresie, *supra* note 8; Donald R. Songer, Sue Davis & Susan Haire, *A Reappraisal of Diversification in the Federal Courts: Gender Effects in the Courts of Appeals*, 56 J. POL. 425 (1994). Boyd, Epstein, and Martin provide no test of employment discrimination claims in general. Boyd et al., *supra* note 4.

professional experiences.”²⁷ Surveying the literature on gender and judging, and reporting the results from their own large-scale study, Haire and Moyer similarly conclude that “issues of sex discrimination” are “[t]he single exception” to the general rule that “women judges . . . decide cases similarly to their male colleagues.”²⁸

II. INSTITUTIONAL STRUCTURE ON THE U.S. COURTS OF APPEALS: THE NORM OF UNANIMITY

The panel-effects literature makes clear that understanding decision making on the U.S. Courts of Appeals requires attention to the institutional context of three-judge appellate panels. This is especially true when studying the influence of a minority group on the appellate bench. By “minority group” we refer to groups of judges that are a numerical minority on the U.S. Courts of Appeals, such as women and nonwhites, regardless of their numbers in the general population. We use the phrase “panel minority” to refer to a minority position on a panel that has divided preferences, regardless of whether the judge is in a majority or minority group on the circuit. In federal trial courts, a minority-group trial judge sitting alone has the authority to decide a case as she sees fit (with the obvious constraint of appellate review). On three-judge appellate panels, where a simple majority prevails, a single minority-group judge sitting with two members of the majority group lacks the power to decide anything. The two judges in the majority group are free to issue binding decisions that wholly reject the views of the minority.

This is normatively significant in the Court of Appeals context because the frequency with which a circuit minority will constitute a panel majority is materially lower than their representation on the circuit. For example, under random assignment in a circuit with fifteen judges, of whom two are members of racial minorities (13%), the probability of drawing a panel that has two members of racial minorities is about 3%. If three members of the circuit are women (20%), women will be in the majority on only 8% of panels.²⁹ Only when a group approaches half of the appellate bench will its members be in the majority about half the time. As compared with trial courts, in which each case is heard by one judge, the use of three-judge appellate panels threatens to significantly diminish the influence of minority-group judges in areas in which minority and majority views differ systematically. In Pitkin’s terms, appellate panels may dilute translation of descriptive representation into substantive representation.³⁰

27. Boyd et al., *supra* note 4, at 391–92, 401. It seems that an informational explanation for women’s different preferences, and their influence on men, in employment discrimination cases in their data (which exclude sexual harassment cases) should extend to sexual harassment cases (which are overwhelmingly employment discrimination claims).

28. HAIRE & MOYER, *supra* note 3, at 48.

29. This result comes from the hypergeometric distribution.

30. See PITKIN, *supra* note 1.

This bleak consequence of appellate-court structure seems the likely outcome in fields of law characterized by differences in preferences across majority and minority-group judges if (1) judges' preferences on case disposition are not affected by their colleagues on the panel, and (2) they vote their sincere preferences. In that event, majority-group judges will decide those cases in the same way regardless of whether their majority is 3–0 or 2–1. Where the panel is split 2–1 in favor of the majority group, the decision of the majority-group judges will not be influenced by the minority-group judge. The minority-group view will prevail only in cases in which two or three minority judges are assigned to the panel. Finally, this simple theoretical account predicts higher rates of dissent among minority-group judges when they serve with two majority-group judges, and among majority-group judges in the rare cases in which they serve with two minority-group judges.

Median voter behavior on appellate panels would yield the same result. Under this view, “it is the preferences of the median member of the judicial panel that should determine the panel’s decision.”³¹ Under the stylized conditions assumed above, on panels with two majority-group judges and one minority-group judge, a majority-group judge will always be the median, and minority-group judges therefore will not influence outcomes unless they are in the majority on the panel. Again, we would expect to see higher rates of dissent by panel minorities (whether they are a majority- or minority-group judge).

Moving from stylized theory to empirical reality, decisions by federal appellate panels are in fact overwhelmingly unanimous, with dissent rates reported in past studies averaging approximately 3% to 9%, varying over time and with respect to issue area.³² These low dissent rates prevail even within particularly contentious issue areas, where measures of panel outcomes are highly correlated with ideology. That is, even in substantive areas of law characterized by systematic ideological disagreement among Court of Appeals judges *across* cases, *within* cases the same judges achieve a remarkably high level of unanimity. The evidence thus suggests that panel unanimity masks disagreement among panel members.

What happens to the views of the panel minority on divided panels? Are panel-minority dissents being suppressed without influencing the content of the panel’s decision? Or are panel-minority dissents avoided through a pro-

31. See Joseph L. Smith & Emerson H. Tiller, *The Strategy of Judging: Evidence from Administrative Law*, 31 J. LEGAL STUD. 61, 74 n.31 (2002); see also Eric R. Claeys, Note, *The Article III, Section 2 Games: A Game-Theoretic Account of Standing and Other Justiciability Doctrines*, 67 S. CAL. L. REV. 1321, 1331–32 (1994).

32. See VIRGINIA A. HETTINGER, STEFANIE A. LINDQUIST & WENDY L. MARTINEK, *JUDGING ON A COLLEGIAL COURT: INFLUENCES ON FEDERAL APPELLATE DECISION MAKING* 47 (2006); DONALD R. SONGER, REGINALD S. SHEEHAN & SUSAN B. HAIRE, *CONTINUITY AND CHANGE ON THE UNITED STATES COURTS OF APPEALS* 105 (2000); Burton M. Atkins & Justin J. Green, *Consensus on the United States Courts of Appeals: Illusion or Reality?*, 20 AM. J. POL. SCI. 735 (1976); Daniel A. Farber, Essay, *Do Theories of Statutory Interpretation Matter? A Case Study*, 94 NW. U. L. REV. 1409, 1430 n.120 (2000).

cess in which minority judges influence the content of the panel decision? A variety of theories have been advanced to explain panel unanimity, which is sufficiently prevalent that scholars regard it as a “norm” on the U.S. Courts of Appeals.³³

A. *Suppressed Dissent Explanations for the Norm of Unanimity*

One set of explanations suggests that Court of Appeals judges often acquiesce in (join) opinions with which they disagree while having no influence on their substance. Unanimity is maintained in the face of disagreement due to (1) workload pressures, (2) a coercive-consensus norm, or (3) the loneliness of dissent. These explanations have been referred to collectively as “suppressed dissent” hypotheses for the unanimity norm on the Courts of Appeals.³⁴

First, many Court of Appeals judges face substantial workloads. Having peaked in 2006, filings averaged 335 per judge in active service in 2010.³⁵ Facing heavy workloads simply to write majority opinions that they are assigned to author, Court of Appeals judges have observed that it is often not feasible for nonwriting judges to invest time to influence the content of opinions that they join.³⁶ This is consistent with the notion that heavy caseloads on the Courts of Appeals are associated with disproportionate deference to opinion authors regarding opinion content.³⁷ In such an environment, Court of Appeals judges are often constrained from taking on the extra work of writing dissents, which they of course recognize will not directly influence circuit law.³⁸ Hence, the absence of dissents does not arise from panel consensus, but

33. See, e.g., CROSS, *supra* note 19, at 305–07; SUNSTEIN ET AL., *supra* note 11, at 69; Kim, *supra* note 23, at 1331; John P. McIver, *Scaling Judicial Decisions: The Panel Decisionmaking Process of the U.S. Courts of Appeals*, 20 AM. J. POL. SCI. 749, 757 (1976).

34. Farhang & Wawro, *supra* note 8, at 306. For a thoughtful recent discussion of dissent in multimembered courts by a federal appellate judge, see Bernice B. Donald, *Judicial Independence, Collegiality, and the Problem of Dissent in Multi-Member Courts*, 94 N.Y.U. L. REV. 317 (2019).

35. Marin K. Levy, *The Mechanics of Federal Appeals: Uniformity and Case Management in the Circuit Courts*, 61 DUKE L.J. 315, 324 (2011). This declined to 292 in 2018. See Email from Marin Levy, Professor of L., Duke Univ. Sch. of L. to Stephen Burbank, David Berger Professor for the Admin. of Just., Univ. of Pa. Carey Sch. of L. (June 9, 2019) (on file with the *Michigan Law Review*). As Professor Levy acknowledges, this is “an imperfect measure of workload,” because “[i]t does not account for the contribution of senior judges, and therefore overestimates. It also does not account for the number of vacancies on the court, and therefore can underestimate.” *Id.*

36. See FRANK M. COFFIN, *THE WAYS OF A JUDGE: REFLECTIONS FROM THE FEDERAL APPELLATE BENCH* 178 (1980); Pierre N. Leval, Madison Lecture, *Judging Under the Constitution: Dicta About Dicta*, 81 N.Y.U. L. REV. 1249, 1262 (2006).

37. See Sean Farhang, Jonathan P. Kastellec & Gregory J. Wawro, *The Politics of Opinion Assignment and Authorship on the US Court of Appeals: Evidence from Sexual Harassment Cases*, 44 J. LEGAL STUD. S59, S62 (2015); Steven A. Peterson, *Dissent in American Courts*, 43 J. POL. 412, 415–16 (1981).

38. See SUNSTEIN ET AL., *supra* note 11, at 65; Atkins & Green, *supra* note 32.

rather from judges who disagree lacking the time or resources needed to record a dissent.

Second, according to the coercive-consensus norm, “social pressure exists . . . for the judge to adhere to the dominant value or position expressed in a decision.”³⁹ Some contend that this norm is rooted in the view that unanimous opinions promote the appearance of legal objectivity, certainty, and neutrality, which promotes courts’ institutional legitimacy, while dissenting opinions create legal uncertainty, erode courts’ credibility, and may diminish compliance.⁴⁰ Even absent explicit pressure, such institutional concerns may cause judges to forgo dissents out of a sense of “organizational loyalty.”⁴¹

Third, some scholars maintain that judges who disagree with a panel decision may refrain from dissent, in part, because of the “intrinsic loneliness of dissent.”⁴² As the size of the court increases, so does the possibility for dissenters to join together and express collective disagreement, making dissent more collegial and appealing.⁴³ Thus, the three-judge panel, where dissents are always solitary, is the institutional environment in which the loneliness of dissent is most likely consequential as a mechanism contributing to panel unanimity.⁴⁴

To the extent that any or all of the suppressed-dissent hypotheses are operative, institutional conditions on the Courts of Appeals may inhibit panel minorities who disagree with panel majorities from articulating disagreement. Within areas of law where the views of majority- and minority-group judges differ systematically, this would produce normatively troubling results. Panel unanimity would be masking two things: (1) the failure of minority-group judges to shape the application and development of law proportionately with their numbers on the Court of Appeals, and (2) the disproportionate suppression of the dissenting views of minority-group judges.⁴⁵

39. Burton M. Atkins, *Judicial Behavior and Tendencies Towards Conformity in a Three Member Small Group: A Case Study of Dissent Behavior on the U.S. Court of Appeals*, 54 SOC. SCI. Q. 41, 43 (1973); see also SUNSTEIN ET AL., *supra* note 11, at 65–66.

40. See HETTINGER ET AL., *supra* note 32, at 19; Farhang & Wawro, *supra* note 8, at 307; Harry T. Edwards, *The Effects of Collegiality on Judicial Decision Making*, 151 U. PA. L. REV. 1639, 1651 (2003).

41. Peterson, *supra* note 37, at 416–17.

42. SUNSTEIN ET AL., *supra* note 11, at 64–71; Farhang & Wawro, *supra* note 8, at 307; Donald R. Songer, *Consensual and Nonconsensual Decisions in Unanimous Opinions of the United States Courts of Appeals*, 26 AM. J. POL. SCI. 225, 227 (1982).

43. See WALTER F. MURPHY, *ELEMENTS OF JUDICIAL STRATEGY* (1964); S. Sidney Ulmer, *Toward a Theory of Sub-Group Formation in the United States Supreme Court*, 27 J. POL. 133 (1965).

44. See Justin J. Green & Burton M. Atkins, *Designated Judges: How Well Do They Perform?*, 61 JUDICATURE 358, 368 (1978).

45. We say disproportionate suppression because, as a result of the hypergeometric function described above, minority judges will be in the panel minority, relative to their percentage of seats, much more than judges with a larger share of seats. Thus, if any of the suppressed-dissent hypotheses is correct, the silencing effect will fall most heavily on minority groups.

B. *Modified Content Explanations for the Norm of Unanimity*

There is another set of explanations for the high degree of unanimity on the Courts of Appeals, which contemplates that withholding of dissents by panel minorities entails modification of the majority opinion in the direction of the would-be dissenter's preferences. This view yields more positive normative implications for how minority-group preferences, when they differ systematically from majority-group preferences, are mediated into the application and development of law. The explanations are (1) deliberation, (2) cue taking, and (3) bargaining. We refer to these explanations for the norm of unanimity, collectively, as "modified content" explanations.⁴⁶ In contrast with a simple majoritarian model of appellate panels, where each judge's preferences are unaffected by their colleagues and all vote to decide according to their sincere preferences, now a lone judge in the minority is able to influence application and development of law on the Court of Appeals. Of course, leading colleagues to change their votes on outcome is a very strong form of content modification.

The deliberative explanation for panel effects is about rational persuasion through the exchange of ideas and information. Judges take the perspectives, arguments, and information presented by one another seriously in the deliberative process, and this can cause judges on a heterogeneous panel, who exchange information and arguments from a wider range of perspectives than occurs on a homogeneous panel, to change their views in the course of deliberations.⁴⁷ The contention that this process explains panel effects is anchored in two premises. The first is that the judge characteristic producing the panel effect (such as ideology, race, or gender) will be associated with bringing distinctive perspectives, arguments, and information to bear in the deliberative process. As Sunstein et al. put it, a more diverse panel will likely have a larger "argument pool" than a more homogeneous one, meaning that a wider range of arguments "are far more likely to emerge and to be pressed."⁴⁸

The second premise is that when a panel is divided 2-1 regarding the best disposition, the two members of the panel majority can be persuaded with arguments and information provided by the single minority judge to decide differently than they would in her absence. According to Sunstein et al., "group polarization" on three-judge panels, where like-minded judges on homogeneous panels reinforce one another's positions and go to extremes, can be mitigated by persuasive arguments and information offered by the panel minority. Breaking "group polarization" involves the process of persuasion through the introduction of arguments and information that would otherwise

46. See Farhang & Wawro, *supra* note 8, at 308.

47. See SUNSTEIN ET AL., *supra* note 11; Edwards, *supra* note 40; Lewis A. Kornhauser & Lawrence G. Sager, *The One and the Many: Adjudication in Collegial Courts*, 81 CALIF. L. REV. 1 (1993).

48. SUNSTEIN ET AL., *supra* note 11, at 76.

be absent.⁴⁹ Panel effects may thus be explained by “rational persuasion within the group” causing the majority to change its assessment of “the best understanding of the law” (or facts).⁵⁰

The panel characteristics that were the focus of these arguments by Sunstein et al., Cross, and Edwards were based on the political party of appointing presidents.⁵¹ The deliberative account was offered to explain why, for example, two judges appointed by Republicans sitting with a judge appointed by a Democrat decide more moderately than three judges appointed by Republicans. Sunstein et al. in particular regard it as a normatively desirable feature of appellate panels that they can mitigate decision making characterized by “group polarization” on homogeneous panels (all Republican or all Democratic).⁵² The same logic can be applied to the gender or racial diversity of panels to explain panel effects. In some types of cases, women and members of racial minorities may bring distinctive perspectives or information to bear in the deliberative process and persuade men or white judges to decide differently than they would on panels with three men or three white judges.⁵³

Another mechanism that scholars have offered to explain panel effects is “cue taking.” Cue taking is a dynamic whereby some judges, seeking an efficient path to rendering a decision, show greater deference to other judges in issue domains in which they are perceived to be more credible or expert.⁵⁴ Although this mechanism does not seem to be a plausible explanation for party panel effects, it has been invoked to explain gender panel effects in “gender-coded cases.”⁵⁵ Social psychological research has found that in areas in which men perceive women as more knowledgeable, they are more prone to defer to their judgment.⁵⁶ The studies finding gender panel effects have examined employment discrimination cases, and several of them have proposed cue taking as a plausible explanation.⁵⁷ A study finding race panel effects in affirmative action cases also proposed something akin to cue taking as a possible explanatory mechanism.⁵⁸

49. *See id.* at 71–73.

50. CROSS, *supra* note 19, at 154–55; *see also* SUNSTEIN ET AL., *supra* note 11, at 73; Edwards, *supra* note 40, at 1656–61.

51. CROSS, *supra* note 19, at 11; SUNSTEIN ET AL., *supra* note 11, at ix; Edwards, *supra* note 40, at 1645.

52. SUNSTEIN ET AL., *supra* note 11, at 138.

53. *See* Farhang & Wawro, *supra* note 8, at 308; Kestellec, *supra* note 8, at 171.

54. DAVID E. KLEIN, MAKING LAW IN THE UNITED STATES COURTS OF APPEALS 31 (2002).

55. Peresie, *supra* note 8, at 1783.

56. *See* Marlaine E. Lockheed, *Sex and Social Influence: A Meta-Analysis Guided by Theory*, in STATUS, REWARDS, AND INFLUENCE: HOW EXPECTATIONS ORGANIZE BEHAVIOR 406, 409–10 (Joseph Berger & Morris Zelditch, Jr. eds., 1985); Barbara F. Meeker & Patricia A. Weitzel-O'Neill, *Sex Roles and Interpersonal Behavior in Task-Oriented Groups*, in STATUS, REWARDS, AND INFLUENCE, *supra*, at 379, 390–91.

57. *See, e.g.*, Boyd et al., *supra* note 4, at 392; Peresie, *supra* note 8, at 1783–84.

58. *See* Kestellec, *supra* note 8, at 171–72 (observing that the mere presence of an African American in an affirmative action case, independent of the content of deliberations, and inde-

We see this account as potentially complementary to the deliberative explanation for panel effects associated with minority-group judges. Like the deliberative explanation, cue taking can include the notion that in some policy domains minority-group judges have different preferences, take different positions in panel deliberations, and influence majority-group judges. The difference is that cue-taking theory suggests a cognitive process of deference to perceived credibility and expertise rather than pure rational evaluation of the perspective offered (although of course deference to expertise can be rational). We agree with scholars who posit that the most plausible account of cue taking by Court of Appeals judges is that they give greater weight to the views of judges they regard as more credible and expert, rather than following them with abject deference.⁵⁹ Thus, if the deliberative account is operative, and if whites and males view colleagues who are members of racial minorities and women as having greater expertise in race- and gender-coded cases, then the cue-taking effect would heighten and reinforce the deliberative effect.

The bargaining explanation for panel effects contemplates that panel minorities, aided by the norm of unanimity, extract concessions from panel majorities, rather than changing their minds. Contrary to the deliberative explanation, the panel minority does not change the majority's "best understanding of the law." Rather, panel majorities strategically change their position in a bargaining process calculated to avert a dissent and achieve unanimity.

In work on strategic judicial behavior, scholars have found considerable evidence that Supreme Court justices are often willing to bargain away from their ideal positions for the purpose of enlarging the coalition of justices who will join an opinion.⁶⁰ Similar dynamics have been observed on three-judge federal appellate panels.⁶¹ These studies focused on strategic concessions by judges necessary to achieve a majority. It is also plausible that concessions will be made to enlarge a majority (beyond a bare majority) by judges who value the appearance of apolitical and neutral decision making, who want to promote legal clarity and predictability, or who are concerned about compliance.⁶²

pendent of her vote, may influence the behavior of whites on the panel). Boyd et al. suggest the same possibility with respect to gender, and they liken this to cue taking. Boyd et al., *supra* note 4, at 392 n.8.

59. See Edward K. Cheng, *The Myth of the Generalist Judge*, 61 STAN. L. REV. 519, 559 (2008).

60. See LEE EPSTEIN & JACK KNIGHT, *THE CHOICES JUSTICES MAKE* 9–14 (1998); FORREST MALTZMAN, JAMES F. SPRIGGS II & PAUL J. WAHLBECK, *CRAFTING LAW ON THE SUPREME COURT: THE COLLEGIAL GAME* 1–15 (2000); see also MURPHY, *supra* note 43, at 56–60.

61. See Ryan J. Owens & Ryan C. Black, *Strategic Bargaining on the United States Courts of Appeals*, SSRN (Jan. 26, 2010), <https://ssrn.com/abstract=1568355> [<https://perma.cc/4E3Y-3MAM>].

62. See LAWRENCE BAUM, *THE PUZZLE OF JUDICIAL BEHAVIOR* 107–08 (1997); HETTINGER ET AL., *supra* note 32, at 19; Edwards, *supra* note 40, at 1651.

A related but distinct idea is that would-be dissenters can threaten to “blow the whistle” (with a dissent) on a majority if it strays from governing law, thereby attracting appellate review. With this threat the panel minority can gain concessions in opinion content.⁶³ It is a form of bargaining, but the majority’s goal is to avoid reversal rather than to secure institutional goals of legitimacy, clarity, or compliance. This tactic may be most likely to work when the panel majority is ideologically distant from the circuit en banc or the Supreme Court.⁶⁴ Whether concessions are motivated by the institutional costs of dissents or by fear of reversal, “[s]ince judges often desire unanimity or, at least, as large a majority as possible, the threat of dissent can be used to gain” them.⁶⁵

If any of these modified-content explanations is operative, panel unanimity need not entail suppression of dissents. Instead, high levels of unanimity would result from substantive modifications of the panel majority’s initial view of a case based upon deliberation, cue taking, or bargaining. As applied to issues on which majority- and minority-group judges differ systematically, the actual operation of modified-content explanations would yield optimistic conclusions about the substantive representation of minority-group judges. In contrast with a scenario in which panel outcomes reflect simple majoritarian processes, or dominance of the median, institutional features of appellate panels would function to facilitate rather than impede substantive minority representation.

The panel-effects studies discussed above relating to race (affirmative action and voting rights cases) and gender (employment discrimination cases) were consistent with modified-content explanations, although they could not determine which explanatory mechanism(s) were at work.⁶⁶ A single African American sitting with two whites, and a single woman sitting with two men, affected the votes of majority-group judges in favor of affirmative action, liability under the Voting Rights Act, and employment discrimination plaintiffs. Within case types in which there are systematic differences in preferences across groups of judges—Democrats versus Republicans, women versus men, African Americans versus whites—three-judge Court of Appeals panels frequently do not operate on a simple majoritarian principle under which judges vote their preferences independently from their interactions with others on the panel. Instead, in some types of cases, judges in the ideological, gender, or racial minority are able to influence the votes of the panel majority.

63. See Cross & Tiller, *supra* note 8, at 2159, 2174.

64. See Jonathan P. Kastellec, *Hierarchical and Collegial Politics on the U.S. Courts of Appeals*, 73 J. POL. 345, 360 (2011); Kim, *supra* note 23, at 1328.

65. Peterson, *supra* note 37, at 418.

66. See Kastellec, *supra* note 8, at 172; see also Shahshahani & Liu, *supra* note 14, at 739 (“[O]ur finding suggests that panel effects (where they do exist) cannot come entirely through the minority judge’s threat of voting the other way because such an explanation cannot account for an individual characteristic that changes the minority judge’s vote but not the co-panelists’.”).

C. Two Types of Panel Effects

The foregoing discussion of suppressed-dissent and modified-content theories highlights that there are two types of panel effects. As observed by Professor Kim with respect to ideology, “the phenomenon of ‘panel effects’ encompasses *two* distinct effects: first, that judges in the majority vote differently (in a less stereotypically ideological fashion) than judges on a homogeneous panel; and second, that judges in the minority vote differently (still less stereotypically ideologically) than judges in the majority.”⁶⁷ Sunstein et al. characterize the first of these—the ability of the minority to draw the majority toward her—as an “ideological dampening” effect, relative to the tendency of unified panels to go to extremes.⁶⁸

Although it is possible that the two types of panel effects will occur together—with the majority and minority reciprocally panel affecting one another—it is not logically necessary that they will. Sunstein et al. argue that ideological dampening of majorities by minorities will vary across policy domains and is less likely to occur in those, such as abortion and capital punishment, in which judges have intense and “entrenched” preferences, undercutting the ability of partisan panel minorities to influence majorities.⁶⁹ It is plausible, as a matter of theory, that in such policy domains the votes of panel minorities can be influenced in the direction of the majority for any of the suppressed-dissent reasons (e.g., workload, consensus norms), while at the same time the majority is not dampened. On this view, voting in policy domains characterized by intense and entrenched views is more likely to be majoritarian.

In a study of gender and race panel effects in employment discrimination cases, Farhang and Wawro observed that if this majoritarian dynamic were operative, the sincere preferences of women and racial minority judges would only become visible (to researchers) when they are in the majority. Farhang and Wawro wrote:

If we find that the probability of an outcome in favor of a civil rights plaintiff does not increase when one minority serves on a panel but does increase when two serve, this would be evidence in favor of the suppressed dissent hypotheses. We would interpret this result as indicating that the more liberal votes of minority judges when they are in a majority better represent their sincere preferences, which are not influencing outcomes when only one serves on a panel.⁷⁰

67. Kim, *supra* note 23, at 1330–31; *see also* Kastellec, *supra* note 64, at 349.

68. SUNSTEIN ET AL., *supra* note 11, at 8–9.

69. *Id.* at 62–63, 69–70. Using different methods and improved data, Professor Fischman finds that there are panel effects in capital punishment and abortion cases. Joshua B. Fischman, *Interpreting Circuit Court Voting Patterns: A Social Interactions Framework*, 31 J.L. ECON. & ORG. 808, 829 (2015). Our point here is conceptual and not about Sunstein et al.’s specific empirical claims.

70. Farhang & Wawro, *supra* note 8, at 310.

III. DATA, MODELS, AND ANALYSIS

This project is part of a larger study of decision making by federal Courts of Appeals on issues of class certification. We examine both published and unpublished cases. With respect to published (precedential) cases, we endeavored to build a comprehensive dataset of federal Court of Appeals panel decisions addressing whether a class should be certified from 1966, when the modern Rule 23 became effective, through 2017.⁷¹ With respect to unpublished (nonprecedential) cases, we collected the same data from 2002, by which time nearly all unpublished cases appeared in the Federal Appendix, through 2017.⁷² In total, we identified 1,344 certification decisions.

Of course, published Court of Appeals decisions differ from unpublished decisions in important respects, and published decisions are not representative of all litigated cases.⁷³ We can learn from both types of decisions. We are interested, in part, in the influence of ideological and identity characteristics of judges, if any, on the creation and development of law. Published Court of Appeals opinions are the vehicle through which circuits create and develop law that is binding on all subsequent panels and on all district courts in the circuit, while unpublished decisions have no precedential weight. In initial models we will examine only published opinions.

We are also interested in the full universe of decided certification appeals. In addition to the possible unrepresentativeness of published cases with respect to judicial behavior, there may be other selection processes at play when analyzing only published opinions. The same judges that render decisions in published cases also decide whether the case will be published, threatening to confound inferences about the relationship between judge characteristics and case outcomes when one studies only published cases. Thus, we also examine models of published and unpublished cases restricted to the circuit years in which we have complete data on both. In those models, the results look very similar to what we observe when analyzing only published cases.

Our dependent variable is whether a decision is pro- or anticertification. In order to code it, the certification analysis in each decision was read in full. We code a decision as procertification (=1) if the Court of Appeals affirms the trial court's certification, reverses the trial court's decision not to certify and directs it to certify, or reverses the trial court's decision not to certify and re-

71. See Appendix, Section I.A, for further details on data collection.

72. See Appendix, Section I.A, for further details on data collection. We say "nearly" all unpublished decisions because the Fifth and Eleventh Circuits' unpublished decisions did not consistently appear in the Federal Appendix until 2003 and 2005, respectively. See Andrew T. Solomon, *Making Unpublished Opinions Precedential: A Recipe for Ethical Problems & Legal Malpractice?*, 26 MISS. COLL. L. REV. 185, 205-06 (2007). As discussed in Section I.A of the Appendix, our models that include unpublished opinions account for this.

73. See Theodore Eisenberg & Stewart J. Schwab, *What Shapes Perceptions of the Federal Court System?*, 56 U. CHI. L. REV. 501 (1989); David S. Law, *Strategic Judicial Lawmaking: Ideology, Publication, and Asylum Law in the Ninth Circuit*, 73 U. CIN. L. REV. 817, 843 (2005); Deborah Jones Merritt & James J. Brudney, *Stalking Secret Law: What Predicts Publication in the United States Courts of Appeals*, 54 VAND. L. REV. 71 (2001).

mands for further proceedings on certification. We code a case as anticertification (=0) if the Court of Appeals affirms the trial court's decision not to certify, reverses the trial court's decision to certify and directs that a class not be certified, or reverses the trial court's decision to certify and remands for further proceedings on certification.

The task of measuring how a judge or panel characteristic may influence lawmaking is difficult. The most clearly observable manifestation of influence is an increase in the probability of a decision in favor of or against certification. However, much bargaining and deliberation among judges focuses on how to frame or justify a decision once it has been determined which party will prevail.⁷⁴ Such decisions about framing and justification can have important ramifications for the actual policy consequences of an opinion for future cases. Although we believe that our dependent variable captures much that is important to the creation and development of the law governing certification under Rule 23, we readily acknowledge its limits, which we regard as one cost of a large-N empirical study, as compared to a qualitative study that examines not just outcomes but also the scope and implications of reasoning.

This measurement constraint limits the inferences we can make from our data. If we find that some judge or panel characteristic is not associated with either pro- or anticertification voting, we cannot conclude that the judge or panel characteristic has no directional influence on opinion content. On the other hand, as previously noted, flipping an outcome is a very strong form of influence, and thus to the extent that we find that a judge or panel characteristic is associated with a decision on certification in a particular direction, that characteristic is likely influencing opinion content in the same direction in more subtle ways.

For each case, we identified the party,⁷⁵ gender, and race of each judge using the Federal Judicial Center's biographical database.⁷⁶ With respect to race, our models focus on whether African Americans have different voting behavior than whites and other judges, with "other" being Hispanic, Asian American, and Native American. Numerous past studies finding that race is associated with Court of Appeals judges' voting have focused, in whole or in part, on African Americans as a discrete category.⁷⁷ We also examined alternative specifications of all models presented in this Article (not displayed), pooling all nonwhites into a single racial minority category and comparing them to whites. In those models, we found no statistically significant differ-

74. See EPSTEIN & KNIGHT, *supra* note 60, at 65–70.

75. Again, we use party of the appointing president as a proxy for judges' ideological preferences.

76. *Biographical Directory of Article III Federal Judges, 1789-Present*, FED. JUD. CTR., <https://www.fjc.gov/history/judges> [<https://perma.cc/8HHF-JYZ9>].

77. See, e.g., HAIRE & MOYER, *supra* note 3, at 28–32; Cox & Miles, *supra* note 8; Kastlelec, *supra* note 8; Jonathan P. Kastlelec, *Race, Context and Judging on the Courts of Appeals: Race-Based Panel Effects in Death Penalty Cases*, SSRN (July 26, 2016), <https://ssrn.com/abstract=2594946> [<https://perma.cc/5QYH-9P6Q>].

ences at either the individual or the panel level.⁷⁸ The race differences we report are distinctive to African Americans.

The inferences we draw from the party, gender, and race variables are based on the assumption that case assignment to panels is random, or “as-if” random, regarding the relationship between panel composition and the merits of the motion for class certification.⁷⁹ We incorporate a battery of control variables that include a variety of case characteristics, which are detailed in Part I.B of the Appendix. The models also contain circuit fixed effects and year fixed effects.

Circuit fixed effects account for any variables that change across circuits that would take the same value for each judge on a panel within that circuit, such as circuit doctrine that may have a pro- or anticertification slant and variation in the size and content of caseloads across circuits. Year fixed effects account for any variables that change over time that would take the same value for each judge on a panel within that year, such as national trends in caseload, the evolution of Supreme Court doctrine, changing composition of the Supreme Court, changes in Rule 23, and salient features of the partisan or political environment, such as an antilitigation posture in a party agenda. They also account for trends over time in attitudes among men and white/other judges toward copanelists who are women and African Americans, which may affect the extent to which the latter are influenced by the former. The circuit and year fixed-effects approach leverages only variation in the relationship between judges’ identity characteristics and their votes *within* circuit and year. This approach allows us to estimate the effects of identity characteristics

78. We also find that Hispanic judges’ votes and the presence of a Hispanic judge on a panel are not associated with higher probabilities of procertification votes and outcomes. Among our cases with published opinions, we have an insufficient number of panels (twelve cases) with a majority of Hispanic judges to evaluate their preferences when in the majority. As we discuss below, it is not possible to evaluate with confidence whether minority-group judges have distinctive preferences in some issue domains based only on their individual votes and their votes when in a panel minority. There are an insufficient number of cases in the data with Asian American and Native American judges to evaluate them separately.

79. By “as-if” random we mean that departures from true random assignment of cases are inconsequential with respect to anything that would affect the outcomes studied. Levy and Chilton report the results of an empirical study finding small differences in the frequency with which circuits constituted panels with particular partisan configurations, such as panels with one Republican, or panels with two Democrats, relative to a scenario in which all panels were constituted purely by random draws from the circuit’s slate of eligible judges. They suggest that such departures from randomness may arise from considerations of workload or judges’ scheduling needs. Adam S. Chilton & Marin K. Levy, *Challenging the Randomness of Panel Assignment in the Federal Courts of Appeals*, 101 CORNELL L. REV. 1, 5 (2015). The validity of inferences from our judge-characteristic variables do not depend on the assumption of random assignment of judges to panels, but rather on the assumption of random assignment of cases to panels once they are constituted. That is, we require the assumption that, for example, panels with two women, or panels with three Democrats, are not more likely to be assigned cases with stronger bases to grant certification. See Deborah Beim, Tom S. Clark & Benjamin E. Lauderdale, *Random Assignment to Death 4* (Jan. 29, 2019) (unpublished manuscript) (on file with the *Michigan Law Review*). In Part I.C of the Appendix we discuss the relationship between random assignment and interlocutory appeals under Rule 23(f).

most effectively because it controls for the influence of any variables that would take the same value for each judge in the same circuit and each judge in the same year.

A. A Descriptive Look at the Data

We first present the data descriptively and then turn to statistical models. We recognize that there may be interesting variation over time in certification voting behavior and outcomes. However, our focus in this Article is on the relationship between judge characteristics and certification votes and outcomes. Other than subsetting the data at its approximate midpoint, we treat the data cross-sectionally and do not examine longitudinal variation. In another article growing out of the larger study, variation in certification over time will be a central focus.

TABLE 1: POLICY AREAS OF CAUSES OF ACTION UNDERLYING CERTIFICATION DECISIONS

	1967–1994 Published	1995–2017 Published	2002–2017 Published & Unpublished
Antitrust	6%	6%	6%
Civil Rights, Antidiscrimination	39%	13%	10%
Civil Rights, Prisoner	7%	4%	7%
Civil Rights, Other	8%	6%	4%
Consumer	5%	23%	25%
Environmental	—	3%	2%
Insurance	—	4%	6%
Labor and Employment	5%	15%	18%
Product Liability	—	6%	5%
Public Benefits	8%	—	—
Securities	11%	9%	8%
Other	11%	11%	9%

Table 1 shows the policy areas of the causes of action underlying the certification decisions in our data for all policy areas that exceed 2% of the data for each subset displayed. We show descriptive statistics separately for discrete periods and data sources that are used in the models discussed later.

Table 2 provides the percentage of procertification votes by party, gender, and race. The procertification voting rate in published cases was similar in 1967–1994 (43%) and 1995–2017 (41%), but the gap between groups grew in the second period. The difference between Republican and Democratic voting about doubled, increasing from 8 to 17 percentage points. African American and white/other judges went from parity in the earlier period to African Americans becoming more procertification by 14 percentage points in the latter. Women went from being less procertification by 6 percentage points in the earlier period to more procertification by 11 percentage points in the later one. When unpublished cases are added for the period 2002–2017, about one-third of the cases are unpublished. The certification rates decline for all judge types (denials are more prevalent in unpublished dispositions).⁸⁰ In these cases, the party and gender gaps remain comparable to published cases in 1995–2017, whereas the race gap narrows. The dissent rate in the data is quite low, at only 2%. Although it increased over time, it never reaches 3% in any segment of the data.

TABLE 2: INDIVIDUAL-LEVEL CERTIFICATION PERCENTAGES

	1967–1994 Published	1995–2017 Published	2002–2017 Published & Unpublished
All Votes	43%	41%	37%
Republicans	39%	34%	30%
Democrats	47%	51%	44%
Men	44%	38%	34%
Women	38%	49%	43%
White/Other	43%	40%	36%
African Americans	43%	54%	43%

One simple way to characterize the data from a panel perspective is to examine the percentage of procertification outcomes (not votes) on panels that have zero, one, two, and three panel members with the characteristic in question. Table 3 displays this information. We lack sufficient data on panels with three women, or with two or three African Americans, to meaningfully characterize them. At the panel level, the relationships are more pronounced than at the individual level. The swing from all-Republican to all-Democratic panels was 17 percentage points in published cases in 1967–1994; it jumped to 35

80. In 2002–2017, there was a procertification outcome in 43% of published cases and 24% of unpublished cases.

percentage points in published cases in 1995–2017; and it was 30 percentage points in all cases in 2002–2017.

TABLE 3: PANEL-LEVEL CERTIFICATION PERCENTAGES

	1967–1994 Published	1995–2017 Published	2002–2017 Published & Unpublished
“—” indicates fewer than ten cases.			
All Cases	43%	41%	36%
<i>PARTY</i>			
All Republicans	32%	28%	28%
1 Dem, 2 Reps	41%	37%	28%
2 Dems, 1 Rep	48%	51%	45%
All Democrats	49%	63%	58%
<i>GENDER</i>			
All Men	44%	34%	30%
1 Woman, 2 Men	38%	44%	37%
2 Women, 1 Man	—	60%	51%
All Women	—	—	—
<i>RACE</i>			
All White/Others	44%	39%	35%
1 African American, 2 White/Others	42%	51%	42%
2 African Americans, 1 White/Other	—	—	43%
All African Americans	—	—	—

We observe small differences across gender and racial panel compositions in published cases in 1967–1994 (the women and African Americans are nearly always in the panel minority). In published cases in 1995–2017, more clear differences emerge. The move from a panel with three men to one with a single woman is associated with a 10 percentage-point increase in certification, and the addition of a second woman is associated with another 16 percentage-point increase, for a total of 26 percentage points. These differences decline modestly but remain large in all cases in 2002–2017, growing by 7 percentage points with the addition of one woman, and an additional 14 percentage points with the addition of a second, for a total increase of 21 percentage points. In published cases in 1995–2017, the addition of one African

American relative to an all-white/other panel is associated with an increase of 12 percentage points in the rate of procertification outcomes, which declines to a difference of 7 percentage points in all cases in 2002–2017.

In order to put the degree of ideological voting behavior in Court of Appeals decisions on class certification in perspective, it is informative to view it in light of the degree of such behavior in other areas. The largest empirical study of Court of Appeals decision making is that of Sunstein et al.,⁸¹ which evaluated voting patterns across the twenty-three policy areas that are listed in Table 4.⁸² In selecting these twenty-three policy areas for study, Sunstein et al. specifically endeavored to study the “most controversial issues of the day,”⁸³ not a random sample of the work of the Court of Appeals.

Using these data as a benchmark for Court of Appeals lawmaking in especially controversial areas, class certification is a little above the median in terms of ideological voting and outcomes.⁸⁴ The 14 percentage-point difference between individual-level Democratic and Republican votes in our class-certification data is a little above the median for the policy areas listed in Table 4 (excluding class actions), which is 10 percentage points. The 31 percentage-point difference in votes on all-Democratic versus all-Republican panels in class-certification cases is a little above the median for the policy areas listed in Table 4 (excluding class actions), which is 25 percentage points. We suspect that many will be surprised that the outcome changes associated with moving from unified Democratic to Republican panels in certification decisions is larger than, for example, such changes in obscenity, capital punishment, employment discrimination, desegregation, and abortion cases.⁸⁵

81. SUNSTEIN ET AL., *supra* note 11.

82. *See id.* at 8. Table 4 reflects differences between individual votes of Democratic and Republican appointees across all cases (D-R) and differences between Democratic and Republican votes on all-Democratic panels versus all-Republican panels (DDD-RRR), which is an approximate measure of differences in case outcomes on such panels. This is because dissent rates on unified panels are exceedingly low. In our certification data, over 98% of unified panels are unanimous.

83. *Id.* at 8.

84. Comparing our data to the Sunstein et al. data is not straightforward because in different policy areas they collected data over different periods, and they were not consistent regarding whether unpublished cases were included. The most common starting decade in the Sunstein data was the 1990s. *Id.* We conclude that the most reasonable basis for comparison is the combination of our 1995–2017 published cases and our 2002–2017 unpublished cases.

85. We show below in statistical models that the actual difference between all-Democratic and all-Republican panels is significantly larger when one conditions on necessary controls. We limit our comparison to descriptive statistics because Sunstein et al. do not use statistical models that would allow comparison.

TABLE 4: SUNSTEIN ET AL. DATA ON DIFFERENCES BETWEEN PERCENT OF LIBERAL VOTES AND OUTCOMES BY DEMOCRATIC VERSUS REPUBLICAN APPOINTEES

	D% - R%* <i>Individual level</i>	DDD% - RRR%** <i>Panel level</i>
Gay and Lesbian Rights	40	86
National Environmental Policy Act	24	51
NLRB	20	50
Affirmative Action	28	49
Sex Discrimination	17	46
Eleventh Amendment Abrogation	21	43
Piercing the Corporate Veil	13	39
Contract Clause	7	33
EPA	10	33
ADA	16	33
<i>Class Certification</i>	14	31
Campaign Finance	17	31
Obscenity	9	25
Federal Communications Commission	8	25
Capital Punishment	24	20
Title VII	9	17
Desegregation	9	15
Standing	5	13
Abortion	16	11
First Amendment	6	7
Criminal Appeals	4	2
Federalism	3	1
Takings	4	-2
Punitive Damages	0	-10
*The % of liberal votes in the policy area by Democratic appointees, minus the % by Republican appointees		
**The % of liberal outcomes in the policy area by all-Democratic panels, minus the % by all-Republican Panels		

B. Statistical Models

Of course, bivariate descriptive statistics can be misleading, especially when they pool cases over a half century and across every circuit. A statistical model is required to get a stronger handle on the data. In the empirical models of published cases that we discuss below, we first present a model pooled over the full period 1967–2017 and then present models separately for the periods 1967–1994 and 1995–2017. Dividing the data roughly in half allows us

to observe whether the significance or magnitudes of results changed materially over time. In addition, the breakpoint we select is substantively significant. As documented in our prior work, beginning around the mid-1990s, restricting opportunities and incentives for private civil actions in general—and class actions in particular—became a more salient issue in the Republican Party. Congressional Republicans introduced a growing number of anti-class action bills; “important advocacy groups associated with the Republican Party, specifically including business groups and conservative law reform organizations,” elevated their focus on curtailing class actions, and Supreme Court justices became more polarized along ideological lines in their voting on Rule 23 issues.⁸⁶

1. Individual-Level Model of Judge Votes

We begin with naive models (in that they ignore panel composition) that include judge-level variables measuring party, gender, and race, as well as the set of independent variables described in Part I.B of the Appendix. These logit models, with certification votes as the dependent variable, are reported in Table A-1 (Part I.D of the Appendix). Coefficients in logit models cannot be directly interpreted, and thus it is necessary to compute predicted changes in probability of procertification outcomes associated with a change in levels or categories of independent variables (such as the change from Republican to Democratic).

In published cases over the full period (Model A), party is significant and positive with a magnitude similar to the simple percentage differences in raw voting rates. Party is associated with an increase of 11 percentage points in the probability of a procertification vote. The separate models for 1967–1994 (Model B) and 1995–2017 (Model C) show that panel ideology grew from a 7 percentage-point difference in the first period to a 12 percentage-point difference in the second. In the 2002–2017 model of all cases (Model D), the difference was 10 percentage points. Gender and race are insignificant in the 1967–2017 (Model A) and 1967–1994 (Model B) models of published cases. They cross the .1 threshold in the 1995–2017 model of published cases (Model C) and the 2002–2017 model of all cases (Model D). African American judges were 8 and 6 percentage points more likely to vote in a procertification direction, respectively, and women were 4 percentage points more likely to do so in both models.⁸⁷

We considered the possibility of interaction effects among party, gender, and race. This allows evaluation, for example, of whether Democratic women, or African American women, are associated with a distinctive probability of procertification voting that is not captured by the direct effects of party and

86. Burbank & Farhang, *supra* note 12, at 1524–28.

87. To anticipate our key finding with respect to gender, we note that when Models C and D are restricted to cases in which there are zero or one woman, the gender variable becomes clearly insignificant ($p=.55$ and $.94$, respectively). The fact that the gender variable crosses the .1 threshold in these models is driven by women’s votes when in the majority.

gender, or race and gender, respectively. We take this up in Part III of the Appendix and do not find evidence for such interaction effects.

2. Panel-Level Model of Outcomes

The data are much more interesting at the panel level. In our panel-level outcome model, the unit of analysis is the case. In each case, we measure panel effects with dichotomous variables (taking the value of 0 or 1) indicating whether the panel contained zero, one, two, or three Democrats; zero, one, two, or three women; and zero, one, two, or three African Americans. Panels with three Republicans, panels with three men, and panels with three white/other judges are the reference categories for the party, gender, and race panel variables. This allows us to evaluate, for example, whether panels with one, two, or three Democrats have a statistically distinguishable probability of procertification outcomes from an all-Republican panel (the reference category), and if so, by what margin. The logistic regression models of certification outcomes reported in Table A-2 (in Part I.D of the Appendix) contain the full set of these party, gender, and race panel variables, and all of the control variables enumerated in Part I.B of the Appendix.

Party. Model A shows that panels with one, two, and three Democrats are all statistically significantly more likely to render procertification outcomes than all-Republican panels in published cases over the full period. Table 5 displays predicted probabilities, derived from the model, of procertification outcomes for each of the four partisan (ideological) panel combinations. All-Republican panels have a 26% estimated probability of a procertification outcome. The probability grows to 48% for RRD panels, to 55% for RDD panels, to 61% for all-Democrat panels.

The separate models for published cases in 1967–1994 (Model B) and 1995–2017 (Model C) show that panel ideology is potent in both periods but materially larger in the latter. In the 1967–1994 period, the move from an all-Republican to an all-Democratic panel is associated with a 26 percentage-point increase in the probability of a procertification outcome, from 31% to 57%. In the 1995–2017 period, it is associated with a 40 percentage-point increase, from 24% to 64%. Further, while RRD panels are statistically distinguishable from RRR panels in the earlier period, in the latter period they are clearly not. This means that one Democrat is not panel affecting, or dampening, two Republicans in 1995–2017. A supplemental regression shows that one Republican did not panel affect two Democrats in published cases in either 1967–1994 or 1995–2017.⁸⁸ Thus, the difference in certification outcomes on DDD panels and RRR panels grew in the contemporary period, and the partisan panel dynamics became uniformly majoritarian, with partisan mi-

88. In order to arrive at this conclusion, we reran the same models (B and C), but this time we held out as the reference category panels with three Democratic judges. The coefficient for a DDR panel is clearly insignificant in both models, showing that one Republican does not panel affect two Democrats.

norities in general failing to influence partisan majorities (no dampening) as measured by outcome in precedential cases.

Model D includes both published and unpublished cases from the period 2002–2017, and we find that the addition of unpublished cases changes little. Although the rate of procertification outcomes declines marginally for all panel types—indicating that unpublished dispositions have a lower certification rate on average—the results for party differences look very similar to those in the 1995–2017 model of published cases. The gap between all-Republican and all-Democratic panels is 38 percentage points (as compared to 40 in published cases in 1995–2017). And it remains the case in this model that partisan minorities do not panel affect partisan majorities.

Gender. Controlling for the partisan and racial composition of the panel, and the variables listed in Part I.B of the Appendix, panels with one woman do not have a statistically distinguishable probability of a procertification outcome when compared to panels with three men in any model. Although we have a large number of panels with one woman—276 panels, or 45% of the cases in the 2002–2017 model of all cases—the coefficient on the variable is small and it never approaches significance. In contrast, for panels with two women it is highly significant, and the difference is large. In published cases over the full period (Model A), moving from a panel with three men to one with two women is associated with a 22 percentage-point increase in the probability of a procertification outcome, growing from 37% to 59%.

The separate models for published cases in 1967–1994 (Model B) and 1995–2017 (Model C) show that the result for panels with two women is driven entirely by the latter period. This is no surprise because there were only two panels with two women in our data prior to 1995. When analysis is restricted to the latter period, the difference between panels with two women and those with three men is a little larger, associated with an increase of 25 percentage points, from 32% to 57% probability of a procertification outcome.

In our model of both published and unpublished cases decided in 2002–2017 (Model D) we again find that the addition of unpublished cases changes little. Panels with two women are associated with a 21 percentage-point growth in the probability of a procertification outcome, which is comparable to the 1995–2017 model of published cases. In our data for the 2002–2017 period, there are 104 panels with two women. Sixty-five different women appear on those panels, which are spread over ten circuits.

This raises the question whether women in the panel minority, when not affecting the outcome votes of their male colleagues, are more likely to dissent. Or are women in the panel minority joining the majority opinion nevertheless and suppressing their dissents? As compared to a man serving on a panel with two other men, women are not more likely to dissent when serving with two men, nor are men when serving with two women. The gender composition of the panel is not in any respect associated with dissenting behavior.⁸⁹

89. See Appendix, Section II.B.

TABLE 5: PREDICTED PROBABILITIES OF PROCERTIFICATION OUTCOMES FOR PARTY, GENDER, AND RACE PANEL COMBINATIONS

	<i>Model A 1967–2017 Published</i>	<i>Model B 1967–1994 Published</i>	<i>Model C 1995–2017 Published</i>	<i>Model D 2002–2017 All Cases</i>	<i>Model E 2002–2017 All Cases No Discrim.</i>	<i>Model F 2002–2017 All Cases No Civ. Rts.</i>
<p>“—” indicates that panel type is not statistically distinguishable from the reference category (in italics). ** indicates no cases in model.</p>						
PARTY						
3 Reps	26%	31%	24%	20%	21%	17%
1 Dem, 2 Reps	48%	51%	—	—	—	—
2 Dems, 1 Rep	55%	56%	52%	47%	47%	50%
3 Dems	61%	57%	64%	58%	58%	67%
GENDER						
3 Men	37%	41%	32%	28%	28%	31%
1 Wom, 2 Men	—	—	—	—	—	—
2 Wom, 1 Man	59%	—	57%	49%	50%	49%
3 Women	**	**	**	—	—	—
RACE						
3 White/ Others	41%	43%	38%	34%	34%	35%
1 Af Am, 2 WOs	50%	—	54%	47%	48%	49%
2 Af Ams, 1 WO	—	—	—	—	—	—
3 Af Ams	**	**	**	**	**	**
<p>Note: In models with three women or two African Americans designated as statistically indistinguishable from panels with three men and those with three white/other judges, the maximum number of cases present is four and fourteen, respectively, and thus we lack sufficient data to offer meaningful estimates.</p>						

We considered the possibility that men’s probability of a procertification vote is unaffected by the presence of one woman because women are, on average, less senior. That is, it is possible that judges are more likely to defer to more senior panel colleagues, and women are on average less senior, such that the lack of women’s influence on outcomes when they are in a minority may be a function of their relative lack of seniority rather than their gender. We

evaluated whether increasing levels of seniority among women serving on panels with two men is associated with certification outcomes and found the relationship to be clearly statistically insignificant. Women's lack of influence on outcomes when they are in a minority is not associated with their level of seniority.

We also considered the possibility that women from a particular political party are associated with a distinctive probability of procertification voting that is not captured by the direct effects of party and gender. We take this up in Part III of the Appendix and find no evidence that the gender differences we detect are distinctively driven by Democratic or Republican women.

Our interpretation of the higher rate of procertification voting by women when they form a panel majority is that it more accurately reflects women's sincere preferences. When women are in the minority, outcomes on male-majority panels are unaffected by these preferences, and from this we conclude that none of the "modified content" hypotheses is operative on such panels *as measured by outcome*. Neither deliberation, nor bargaining, nor cue taking is allowing women in the panel minority to affect certification outcomes in the direction of the preferences revealed when they are in the majority.⁹⁰

This result stands in marked contrast to past work finding gender or race panel effects on the Courts of Appeals.⁹¹ In each of these studies, where there was clear evidence of gender- or race-based variation in preferences, the presence of one woman or African American in the panel minority was associated with the voting of men and whites in the majority. All of these results occurred in the disposition of substantive law claims concerning discrimination and inequality.⁹² A different and more majoritarian gender dynamic is at work in our class-certification decisions.

An important caveat is necessary regarding what can be inferred from the data. The data show that one woman's presence on a panel does not increase

90. As a theoretical matter we would not expect cue taking to be operative in certification decisions, at least outside the context of "gender-coded issues." Peresie, *supra* note 8, at 1783.

91. See Boyd et al., *supra* note 4; Cox & Miles, *supra* note 8; Farhang & Wawro, *supra* note 8; Kastellec, *supra* note 8; Peresie, *supra* note 8. Indeed, inquiring whether a deliberation account fully captured the panel effects she found, when Peresie "included a dummy variable in the regressions for the presence of a second female judge, . . . that variable had no statistically significant effect on male judges' [votes]." Peresie, *supra* note 8, at 1782. Farhang and Wawro similarly found that "having a majority of women on the panel does not increase the probability that either male or female judges on the panel will vote for the plaintiff over the increase that occurs when there is one woman serving on the panel." Farhang & Wawro, *supra* note 8, at 320; see also *id.* at 321 (no effect on outcome).

92. Haire and Moyer, when analyzing a large sample of cases pooled across many policy areas, find that the presence of two "nontraditional" judges (female or nonwhite) is associated with greater variance, or unpredictability, in white male judges' votes. HAIRE & MOYER, *supra* note 3, at 96–97. Ultimately, it is not possible to derive any inference from Haire and Moyer's variance results regarding the ideological direction of white male judges' votes (or nontraditional judge votes) in panels composed of one white male and two nontraditional judges, and thus those results do not speak to the substance of our analysis.

the probability of a procertification outcome relative to panels with three men. Because we lack a sufficient number of panels with three women (there are only four in the data), the data cannot rule out the possibility that one man similarly fails to influence the probability of certification relative to panels with three women. Because we lack the benchmark of how panels with three women would decide certification issues, we cannot observe whether one man on a panel affects two women relative to panels with three women. Thus, we do not know whether the structure of gender panel dynamics is symmetric or asymmetric.

Fifteen percent of the judge votes in the data are cast by women, and there is at least one woman on 29% of the three-judge panels, but women are in the majority in only 8% of the panels. Men are 87% of the votes and in the majority 92% of the time. As distinguished from the earlier studies finding gender panel effects, where women in the minority influenced outcomes, the majoritarian character of gender panel dynamics in certification decisions yields circuit lawmaking that significantly underrepresents women's preferences (and overrepresents men's preferences) relative to their numbers on the Courts of Appeals.

Race. Controlling for the partisan and gender composition of the panel and the variables listed in Part I.B of the Appendix, panels with one African American have a statistically significantly higher probability of a procertification outcome than all-white/other panels in published cases over the full period (Table A-2, Model A). All white/other panels have a predicted probability of 41% to produce a procertification outcome, and for panels with one African American the probability is 50% (Table 5), for a 9 percentage-point growth. In contrast, panels with two African Americans are not statistically distinguishable from all white/other panels. However, with only eleven such panels in this model we do not regard this estimate as meaningful.

The separate models for published cases in 1967–1994 (Model B) and 1995–2017 (Model C) show that the result for one-African American panels is primarily driven by the latter period. Of 166 one-African American panels, seventy-two are in the former period, and ninety-four in the latter. In the first period the variable is insignificant, and in the second period the coefficient doubles and becomes significant. In the 1995–2017 model the presence of one African American is associated with an increase of 16 percentage points, from 38% to 54% probability of a procertification outcome (Table 5).

In the model of both published and unpublished cases decided in 2002–2017 (Model D) we again observe little change relative to the model of published cases decided in 1995–2017. The presence of one African American remains significant and is associated with a 13 percentage-point increase in the probability of a procertification outcome, from 34% to 47%. In our data for 2002–2017, there are 130 panels with one African American. Thirty-three African Americans appear in those panels, which are spread over every circuit.

We considered the possibility that African Americans from a particular political party are associated with a distinctive probability of procertification outcomes that is not captured by the direct effects of party and race. We take

this up in Part III of the Appendix and find no evidence that the race differences we detect are distinctively driven by Democratic or Republican African Americans.⁹³ Likewise, we considered whether judges with the intersectional identity of African American women (or men) are associated with more (or less) procertification voting than is captured by the separate direct effects of the race and gender variables, and we again find no evidence that it is the case, although the small number of African American women in the data limit our ability to detect small differences.⁹⁴

3. Panel-Level Model of Judge Votes (as distinguished from Case Outcomes)

We also examined models of individual judge votes, where the key independent variables capture both the salient characteristic of the voting judge and those of her colleagues on the panel. This allows us to compare, for example, the votes of a man sitting with two men with the votes of a man sitting with one man and one woman. Part II of the Appendix explains in detail how these variables were constructed. We then examined vote-level versions of the case-level logit models we have just discussed, including the same control variables. The models are presented and discussed in Part II of the Appendix. Given the very high rate of unanimity in our cases (98%), it is not surprising that the vote-level models tell the same panel effects story as the outcome-level models with respect to party, gender, and race panel effects.

4. Discrimination and Other Civil Rights Claims Versus Other Underlying Causes of Action

Another distinctive feature of our results concerns the existence of variation in judges' preferences along gender and race lines in the area of class certification. As we have noted, past findings of variation in Court of Appeals judges' voting along gender and racial lines have clustered heavily in areas relating to discrimination and inequality, and variation has often been absent even in those areas.⁹⁵ Boyd, Epstein, and Martin's study of thirteen policy areas finds gender associated with differences in voting in only one (gender-based employment discrimination), and they find no differences in a number

93. See Appendix, Part III. When we say that the association is not driven by African Americans from a particular political party, we mean only that the two types of panels are not statistically distinguishable from one another. In another sense, it is clearly Democratic African Americans that are driving the result. Because Democratic presidents have appointed African Americans at a dramatically higher rate, in 87% of our cases with one African American, the African American was appointed by a Democrat. We were unable to examine specifications comparing different partisan combinations on panels with two African Americans (as we do for gender) because there are an insufficient number of such panels.

94. See Appendix, Part III.

95. See HAIRE & MOYER, *supra* note 3; Boyd et al., *supra* note 4; Farhang & Wawro, *supra* note 8; Peresie, *supra* note 8.

of areas with comparable or higher gender salience (abortion, sexual harassment, and affirmative action).⁹⁶ Haire and Moyer find that, in a large sample of civil cases spanning many policy areas that have a liberal/conservative dimension, African Americans do not vote more liberally than whites on the Courts of Appeals. However, in employment discrimination cases based on race, they have a higher probability of voting in the pro-plaintiff direction.⁹⁷

We considered the possibility that the gender and race results we report as to class certification are being driven by cases with underlying discrimination claims, and thus that they do not represent much of a departure from existing work on gender, race, and judging. That is, past work has shown that women and African Americans on the Courts of Appeals are more likely to favor plaintiffs making at least some types of discrimination claims,⁹⁸ and from there it is a short step to favoring discrimination plaintiffs seeking class certification. When all types of discrimination claims are combined, they constitute 10% of the data for our 2002–2017 models of published and unpublished cases, so that their influence on the results may be important. We excluded those cases and reran the model.

The same gender and race panel variables remain significant and of comparable magnitude when we drop discrimination claims.⁹⁹ The differences in predicted probabilities between panels with three men and panels with two women, and between panels with three white/other judges and panels with one African American, are virtually identical.¹⁰⁰ We then additionally excluded cases coded prisoners' rights and other civil rights (which together constitute another 11% of the data) so that there are no civil rights claims of any kind remaining in the data. In this model, the differences in predicted probabilities across the same panel types again remain significant and of similar magnitude. Panels with two women are associated with an 18 percentage-point increase in the probability of a procertification outcome, and panels with one African American are associated with a 14 percentage-point increase.¹⁰¹

We conclude with confidence that the results are not driven by discrimination claims or civil rights claims more broadly. When all civil rights claims (discrimination or other) are excluded from the data for the 2002–2017 period, the policy areas constituting 2% or more of the underlying claims are, in descending order of share: consumer, labor and employment (primarily wage and hour and ERISA), securities, insurance, antitrust, product liability, and environmental and toxic substances. Even outside the domain of antidiscrimination law and civil rights law more broadly, panels with women in the ma-

96. See Boyd et al., *supra* note 4, at 400–06.

97. HAIRE & MOYER, *supra* note 3, at 30–32 (compare Model 1 and Model 4 in Table 1).

98. Farhang & Wawro, *supra* note 8, at 577 (gender); Kastlelec, *supra* note 8, at 178 (race).

99. The results are presented in Model E *infra* in Table A-2.

100. See *supra* Table 5.

101. See *supra* Table 5; *infra* Table A-2, Model F.

jury, and panels with one African American, are more pro-certification. This result departs sharply from conventional wisdom and existing research.¹⁰²

C. *Explaining Pro-certification Preferences and Gender Panel Effects*

1. Pro-certification Preferences

It is unclear why women and African Americans on the Courts of Appeals have more pro-certification preferences. The explanation that connects most readily to existing literature is that these preferences are tied to findings showing that women and African Americans are more attentive to claims of discrimination and inequality.¹⁰³ The fact that our gender and race results are robust when such claims are excluded does not foreclose the validity of this line of reasoning. It is beyond question that the class action device has been an enormously valuable tool in the struggle for gender and racial equality. In light of the transsubstantive nature of Rule 23, interpretations of the rule in the domains of consumer, securities, and wage and hour law, for example, can shape future applications in domains such as employment, housing, and voting discrimination. Strategic judges concerned with developing the device for use in the latter areas may be motivated to render more pro-certification decisions in the former areas. If this is true, the transsubstantive character of the rule causes pro-certification preferences in the domain of discrimination and inequality to have pro-certification spillover effects in all other domains to which the rule applies.

To be sure, this is speculative. The fact that the gender and race results are robust when discrimination and other civil rights claims are excluded may also mean that women and African Americans simply have more pro-certification preferences in general. One variant of this account is only a short step from the explanation in the last paragraph minus the strategic dimension. If women and African Americans are more pro-plaintiff in cases raising some types of claims based on discrimination and inequality, and they perceive that the class action device has been an enormously valuable tool in the struggle for gender, racial, and other forms of equality, then it may be that women and African Americans have a more favorable view of the class device as a vehicle to provide remedies and achieve regulatory goals more generally.

Whatever the reason, our gender results counsel caution in interpreting past studies as having demonstrated that women on the Courts of Appeals do not have different preferences than men with the exception of certain discrimination claims. An important study cited for this conclusion was conducted by Boyd, Epstein, and Martin,¹⁰⁴ which finds that in twelve out of

102. It is likewise the case that when we exclude all discrimination and other civil rights claims from the 1995–2017 model of published cases, the gender and race panel results are robust.

103. See *supra* notes 24–28 and accompanying text.

104. Boyd et al., *supra* note 4.

thirteen policy areas, gender was not associated with votes. The single exception was gender-based employment discrimination claims.¹⁰⁵ However, they acknowledge that in each area they studied their sample sizes were too small to evaluate panels with two women.¹⁰⁶ The study thus was unable to evaluate the possibility that a combination of majoritarian voting dynamics and pressure toward suppressed dissent, or some other mechanism, could be such that in some policy domains women's different preferences will only become visible in panels where they constitute the majority. That is what we observe in our class-certification data.

It is only because of our unusually large dataset relative to norms in the field, and the heavy concentration of our cases in the last two decades—during which time there was a substantially larger number of panels with two women—that we had a sufficient number to detect that women's preferences are more procertification when in the majority. This limitation in existing scholarship on the influence of gender on the Courts of Appeals is an important contextual consideration for interpreting every study that we are aware of reporting null results for gender, none of which examines panels with two women.¹⁰⁷

2. Gender Panel Effects

Our data do not allow us to identify the panel dynamics that explain why the presence of one woman on a panel is not associated with higher rates of procertification outcomes but the presence of two women is. Nevertheless, we recognize some possible explanations. One is straightforward. The single woman on a panel, on average, advocates a more procertification view, but this advocacy does not affect the outcome votes of the men in the majority because they have intense preferences in the domain of class certification and do not concede on outcomes. Sunstein et al., who studied partisan panel effects but not race and gender, argue that panel effects are less likely to occur in policy domains, such as abortion and capital punishment, in which judges have intense and “entrenched” preferences, undercutting the ability of partisan panel minorities to influence majorities.¹⁰⁸

105. *Id.* at 390.

106. *Id.* at 392 n.8, 393 n.11.

107. See Cox & Miles, *supra* note 8, at 43–45 (reporting that gender is not associated with Court of Appeals judges' likelihood of voting in favor of liability in voting rights cases based on individual-level results); Kastellec, *supra* note 8, at 178 (same with respect to voting in favor of affirmative action programs on the U.S. Courts of Appeals); Sisk et al., *supra* note 24, at 593 (same with respect to voting in favor of plaintiffs alleging religious discrimination on the U.S. Courts of Appeals); Songer et al., *supra* note 26, at 433 (same with respect to search and seizure and obscenity cases on the U.S. Courts of Appeals). None of these studies examined female-majority panels. In some of these studies, the authors clearly lacked a sufficient sample size to do so, and in some they were primarily interested in studying race, but all report gender to be insignificantly associated with the outcome variables studied.

108. See SUNSTEIN ET AL., *supra* note 11, at 62–63, 69–70.

As we have already noted, we lack sufficient data on panels with three women to draw any inferences regarding whether one man is affecting the votes of the two women who are his copanelists relative to the benchmark of panels composed of only women. Thus, we cannot rule out the possibility that judges in the gender majority—in general, whether men or women—do not give ground on outcomes in this policy domain. This explanation for the absence of a one-woman panel effect would be analogous to what is probably the most likely explanation for the absence of a one-Democrat or one-Republican panel effect in the 1995–2017 period (which is when the two-women panel effect is present). On this account, judges simply care intensely about certification and have entrenched views, and thus majoritarian dynamics prevail.

Our results for panels with one African American counsel caution in embracing—and arguably militate against—this interpretation. At the same time that one female judge is not panel affecting her two copanelists, one African American judge is doing so strongly. We therefore know that Court of Appeals judges' votes on certification are, in fact, not impervious to significant influence by one judge from another group. The puzzle is why this occurs with respect to race but not gender.

Recent innovative work in political science has focused on the gender gap in political discussions and decision making (and critical mass theory applied to this context).¹⁰⁹ This work leverages an insight drawn from the existing literature that numbers alone (descriptive representation) do not guarantee women substantive representation. It uses institutional theory to identify structural arrangements and norms that may affect the ability of women to exercise “[a]uthoritative representation,” which is “any feature of communication among decision-makers that affects their authority,” or their “expectation of influence,” during the decision-making process.¹¹⁰ Scholars have tested hypotheses drawn from this merger of gender and institutional theory by analyzing behavior in a variety of discussion and decision-making contexts, in-

109. See, e.g., Tali Mendelberg & Christopher F. Karpowitz, *Power, Gender, and Group Discussion*, 37 *ADVANCES POL. PSYCH.* 23, 23 (2016) [hereinafter Mendelberg & Karpowitz, *Group Discussion*]; Tali Mendelberg, Christopher F. Karpowitz & J. Baxter Oliphant, *Gender Inequality in Deliberation: Unpacking the Black Box of Interaction*, 12 *PERSPS. ON POL.* 18, 18 (2014) [hereinafter Mendelberg et al., *Black Box*] (quoting Karen Beckwith & Kimberly Cowell-Meyers, *Sheer Numbers: Critical Representation Thresholds and Women's Political Representation*, 5 *PERSPS. ON POL.* 553, 553 (2007), who argue that “critical mass theory is both problematic and under-theorized, its mechanism ‘unspecified’ and the power of small numbers of women ‘neglected’”).

110. Christopher F. Karpowitz, Tali Mendelberg & Lauren Mattioli, *Why Women's Numbers Elevate Women's Influence, and When They Do Not: Rules, Norms, and Authority in Political Discussion*, 3 *POL. GRPS. & IDENTITIES* 149, 150, 158 (2015) [hereinafter Karpowitz et al., *Women's Numbers*]; Mendelberg et al., *Black Box*, *supra* note 109, at 20; see *id.* (“The more that the features of the decision-making process signal and emphasize women’s status in the decision-making, that is, the more authoritative representation the process provides to women, the more symbolic and substantive representation women will have as a consequence.”).

volving both elite and nonelite participants, and they have done so in controlled experiments and with data from lived experience.¹¹¹

This institutional perspective enabled another key insight: achieving authoritative and substantive representation sometimes requires institutional help, such as a decision rule requiring unanimity rather than a simple majority. Research has shown that, at least in some settings, a decision rule requiring a simple majority is inimical to the ability of women to exercise a fair share of influence when they are in the minority, a disadvantage that continues in some contexts until women constitute a majority (or even a supermajority).¹¹² Empirical research suggests two distinct (but obviously related) mechanisms that may explain this pattern.

One concerns how amenable to persuasion a woman's audience is. In their award-winning research, Mendelberg and Karpowitz find that under majority rule in an experimental context, when women are in the minority they are treated as having less authority, are accorded less respect in the deliberative process, and are less likely to be perceived as making influential contributions, as compared to when they are in the majority. The authors detect no corresponding reductions for men on these dimensions when they move from majority to minority.¹¹³ A reasonable reading of this research is that, holding constant the substance of a woman's contributions, she will be more likely to persuade others and affect outcomes when in the majority.

An alternative or supplementary mechanism concerns how the deliberative context affects the substance of women's contributions. Mendelberg and Karpowitz find—again, under majority rule in an experimental context—that women in the minority are less likely to express their sincere preferences as

111. See CHRISTOPHER F. KARPOWITZ & TALİ MENDELBERG, *THE SILENT SEX: GENDER, DELIBERATION, AND INSTITUTIONS* (2014); Karpowitz et al., *Women's Numbers*, *supra* note 110; Tali Mendelberg, Christopher F. Karpowitz & Nicholas Goedert, *Does Descriptive Representation Facilitate Women's Distinctive Voice? How Gender Composition and Decision Rules Affect Deliberation*, 58 AM. J. POL. SCI. 291 (2014); Mendelberg & Karpowitz, *Group Discussion*, *supra* note 109; Tali Mendelberg & Christopher F. Karpowitz, *Women's Authority in Political Decision-Making Groups*, 27 LEADERSHIP Q. 487 (2016) [hereinafter Mendelberg & Karpowitz, *Political Decision-Making Groups*]; Tali Mendelberg, Christopher F. Karpowitz & Lauren Mattiolo, *Gender and Women's Influence in Public Settings*, in EMERGING TRENDS IN THE SOCIAL AND BEHAVIORAL SCIENCES 1 (Robert Scott & Stephen Kosslyn eds., 2015) [hereinafter Mendelberg et al., *Women's Influence*]; Mendelberg et al., *Black Box*, *supra* note 109; Christopher F. Karpowitz, Tali Mendelberg & Lee Shaker, *Gender Inequality in Deliberative Participation*, 106 AM. POL. SCI. REV. 533 (2012); PAMELA BAN, JUSTIN GRIMMER, JACLYN KASLOVSKY & EMILY WEST, *A WOMAN'S VOICE IN THE HOUSE: GENDER COMPOSITION AND ITS CONSEQUENCES IN COMMITTEE HEARINGS* (2018) [hereinafter BAN ET AL., *A Woman's Voice*], <https://pdfs.semanticscholar.org/9044/e3d065e6611ee987ce21a9bf3fd6e5a3e085.pdf> [https://perma.cc/765M-5KSV].

112. See Mendelberg et al., *Women's Influence*, *supra* note 111, at 4–5, 7.

113. See Mendelberg et al., *Black Box*, *supra* note 109, at 25–29. The authors' measures of treating a person with authority and respect during a deliberative decision-making process were based on the frequency of interruptions and the negative or positive valence of the language used by those interrupting. Perceived influence was measured based on questioning participants after the group decision process ended. *Id.* at 22–23.

compared to when they are in the majority.¹¹⁴ The authors see this outcome as tied to women being treated as less authoritative, less deserving of respect, and less influential when in the minority.¹¹⁵

The relationship of these theories to our research is speculative and, given the cloistered context of appellate judicial decision making, they are not easily tested by quantitative or qualitative research. We are mindful of the hazards of transposing to decision making on the Courts of Appeals a theory previously tested in quite different contexts.¹¹⁶ That said, the potential explanatory power of this theory should not be rejected based on the notion that gender bias, even unconscious gender bias, is not plausibly operative in Court of Appeals decision making. We suspect that few men would have thought that women experience gender bias when arguing cases in the Supreme Court. Yet, recent research shows that they do.¹¹⁷ More to the point, recent research also shows that women on the Supreme Court themselves experience gendered behavior during oral argument, where they are interrupted at higher rates than men.¹¹⁸ Still more recent research, confined to interruptions by jus-

114. See Karpowitz et al., *Women's Numbers*, *supra* note 110, at 168; Mendelberg & Karpowitz, *Political Decision-Making Groups*, *supra* note 111, at 497 ("In other words, when empowered by the group context, women not only spoke *more*, they also spoke *differently*. . . . We found that when women were outnumbered by men under majority rule, they were dramatically more likely to advocate for principles *other* than the one they privately preferred.").

115. See Mendelberg & Karpowitz, *Political Decision-Making Groups*, *supra* note 111, at 498–99.

116. See BAN ET AL., *A Woman's Voice*, *supra* note 111, at 5 ("[W]e are cautious when applying theory and findings with respect to non-elites to [a study of discussion dynamics in congressional hearings]."); *id.* at 7–8 (noting adjustments necessary given focus on discussion, not deliberation); Karpowitz et al., *Women's Numbers*, *supra* note 110, at 161 ("Thus, the effect of numbers on women's authority—and more broadly, the political psychology of gendered participation—cannot be understood apart from careful attention to the *interaction* of the social identity of the members and the rules under which the group comes together."). Note, however, that Karpowitz and Mendelberg replicated a number of their key findings in an experimental setting by analyzing officials' speech during school board meetings. See KARPOWITZ & MENDELBERG, *supra* note 111, at 273–304 ("Gender Inequality in School Boards").

117. See Dana Patton & Joseph L. Smith, *Lawyer, Interrupted: Gender Bias in Oral Arguments at the US Supreme Court*, 5 J.L. & CTS. 337, 338 (2017) (finding that women are interrupted earlier, allowed to speak for less time between interruptions, and subjected to more and longer interventions by justices compared to men). The authors also find that, unlike men arguing before the Court, women do not enjoy the benefit of being treated more deferentially (more time to first interruption, and less frequent interruption) when they represent the winning side. *Id.* at 352. However, they find that this pattern disappears (becomes statistically insignificant) in oral arguments in cases involving gender-related issues. *Id.*

118. See Tonja Jacobi & Dylan Schweers, *Justice, Interrupted: The Effect of Gender, Ideology, and Seniority at Supreme Court Oral Arguments*, 103 VA. L. REV. 1379, 1482 (2017) ("Our findings clearly establish that women on the Supreme Court are interrupted at a markedly higher rate during oral arguments than men. Additionally, both male Justices and male advocates interrupt women more frequently than they interrupt other men."). This phenomenon appears to have survived the recent move to telephone arguments. Based on an analysis of the arguments in ten cases in May 2020, Professor Litman found that interruptions by the Chief Justice, who controlled the time available to each justice, "were markedly gendered and ideological. The Chief Justice only interrupted liberal Justices, and nine of the 11 interruptions were of women

tices, finds that “female justices speak significantly less when interrupted by male justices.”¹¹⁹

This work on gender may shed light on why patterns of gender panel effects in our class action data differ from those found in employment discrimination cases. In the latter area, researchers concluded that the presence of one woman *did* significantly influence men in the majority, an effect that they thought may be explained by the men taking “cues” from women who they perceived (based on gender) as more expert or informed.¹²⁰ If this account of the mechanism is correct, in employment discrimination cases in the Courts of Appeals women may be perceived by men as *more*, rather than less, authoritative.¹²¹ Why does this panel effect disappear when we shift to class-certification decisions?

In the domain of class certification, in contrast with employment discrimination, there is no reason to anticipate that men on a panel will take cues from women based on their gender. In that domain a woman is no longer empowered to sway the men’s votes by her gender and the perspectives and experience it is presumed to entail. If the dynamics identified by Mendelberg, Karpowitz and their colleagues are at play, it could suggest several possibilities. One is that a woman in the minority who advocates for a preferred outcome is less successful because, as a panel minority in a domain that does not elicit gender-based deference, she is regarded as less authoritative and influential.¹²² Another is that the reinforcement of another woman increases her

Justices.” Leah M. Litman, *Muted Justice*, SSRN 27 (May 19, 2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3605444 [<https://perma.cc/58ME-AUBN>].

119. Adam Feldman & Rebecca D. Gill, *Power Dynamics in Supreme Court Oral Arguments: The Relationship Between Gender and Justice-to-Justice Interruptions*, 40 JUST. SYS. J. 173, 188 (2019).

120. See Boyd et al., *supra* note 4, at 392; Peresie, *supra* note 8, at 1783–84. This also seems consistent with the finding of Patton and Smith that although women do not enjoy the benefit of being treated more deferentially in oral arguments when they represent the winning side (as men are), this pattern disappears in cases involving gender-related issues. Patton & Smith, *supra* note 117, at 352.

121. In a brief discussion of judicial decision making as “[o]ne civic setting where the effect of group composition can be seen clearly,” two scholars who have been at the forefront of recent gender-gap research summarize a few panel effects studies finding that “when judicial panels include at least one woman, the panel is more likely to take a pro-plaintiff position.” Mendelberg & Karpowitz, *Political Decision-Making Groups*, *supra* note 111, at 493. They conclude that “at least with respect to some issues, small individual-level differences between men and women may be amplified by the gender context of the group, and women’s presence in group decision-making bodies can affect the group’s outcome.” *Id.* See also KARPOWITZ & MENDELBERG, *supra* note 111, at 339–40; Mendelberg et al., *Women’s Influence*, *supra* note 111, at 10 (“[M]ore remains to be done to understand the mechanisms of these gender composition effects or the processes by which judges interact.”).

122. Interpreting an interview with Justice Ginsburg, Adam Liptak observed: “But Justice Ginsburg said her own influence in all sorts of cases at the justices’ conferences was uncertain. ‘I will say something and I don’t think I’m a confused speaker and it isn’t until somebody else says it that everyone will focus on the point,’ Justice Ginsburg said.” Adam Liptak, *The Waves Minority Judges Always Make*, N.Y. TIMES (May 30, 2009), <https://www.nytimes.com/2009/05/31/weekinreview/31liptak.html> [<https://perma.cc/AT4E-4JVV>].

propensity to advocate preferences that differ systematically from those of her male colleagues in areas without obvious gender salience, such as class certification.¹²³ We are aware of no research that explores the issues we have been discussing as applied to race rather than gender.

CONCLUSION

In this Article we have undertaken the first empirical analysis (as far as we are aware) of how potentially salient characteristics of Court of Appeals judges and panels influence class-certification decisions under Rule 23. We find that the party of the appointing president has a very strong association with Court of Appeals judges' votes on certification, with all-Democratic panels having dramatically higher rates of certification than all-Republican panels—nearly triple in about the past twenty years. Our findings on race and gender panel effects show that these identity characteristics of judges also matter significantly to certification. We are aware of no prior study that reports both gender and race panel effects in the same body of cases. Contrary to conventional wisdom, our results show that diversity on the bench is consequential to lawmaking beyond policy areas conventionally thought to be of particular concern to women and members of racial minorities, which constitute a relatively narrow band of substantive law.

In seeking an explanation for the procertification preferences of women and African Americans on the Courts of Appeals, we note that class action doctrine is a form of transsubstantive procedural law that traverses many policy areas. Whether or not as a result of strategic judicial behavior, the effects of gender and racial diversity on the bench through certification radiate widely across the legal landscape, influencing implementation in such areas as consumer, securities, labor and employment, antitrust, insurance, product liability, and environmental law, among many other areas. The results highlight how the consequences of diversity extend beyond conceptions of “women’s issues” or “minority issues.” The results also suggest the importance of exploring the effects of diversity on transsubstantive procedural law more generally.

Our findings on gender panel effects in particular are novel in the literature on panel effects and the literature on gender and judging. Past work focusing on substantive antidiscrimination law found that one woman can influence the votes of men in the majority (mirroring what we find with respect to African Americans in class-certification decisions). These results al-

123. Women may be “respond[ing] to situations that signal to them that they have power by accelerating their participation and to situations that signal their powerlessness by decreasing their participation.” Mendelberg & Karpowitz, *Group Discussion*, *supra* note 109, at 26. Cf. Mendelberg et al., *Black Box*, *supra* note 109, at 24 (“Gender composition shifts the tone of men’s direct engagement with women from clearly negative to highly positive. But it does so only under majority rule.”); *id.* at 27 (“Similarly, we now understand why majority rule is bad for minority women—they seldom hear encouragement when they speak.”). This perspective does not suggest that women are more influenced by signals about their power than men, but rather that they receive different signals.

lowed for optimism that the panel structure—which threatens to dilute the influence of minority groups on the bench—actually facilitates minority influence, whether through deliberation, cue taking, bargaining, or some other mechanism. Although the mechanism remained a mystery, it was clear that panels were not operating in a simple majoritarian fashion that trounced minority views.

Our gender results are quite different and normatively troubling. We observe that women have more procertification preferences based on their votes when in the majority. However, women are not more likely to vote in a procertification direction when they are the panel minority; men sitting with women are not more likely to do so when they are in the majority; and such cases are not more likely to yield procertification outcomes. Only when women are in the majority do we observe notably elevated procertification votes by both women in the majority and men in the minority, yielding a higher rate of procertification outcomes. Panels with a majority of women occur at sharply lower rates than women's percentage of judgeships.

In seeking to identify a mechanism that may explain these results, we consider a number of admittedly speculative possibilities. One is that men on the Courts of Appeals have intense and entrenched views on certification, making their votes exceptionally difficult to influence. Several others are illuminated by recent scholarship on the gender gap and critical mass theory. One is that in the domain of class certification, unlike that of employment discrimination, a woman is not empowered to sway the votes of men by her gender and the perspectives and experience it is presumed to entail. A woman in the minority who advocates for a preferred outcome is less successful because, as a panel minority in such a domain, she is regarded as less authoritative and influential. Another is that the reinforcement of another woman increases her propensity to advocate preferences that differ systematically from those of men in areas without obvious gender salience, such as class certification.

Finally, the majoritarian structure of the gender panel results counsels caution in the interpretation of prior work purporting to find that gender is consequential to Court of Appeals decision making only in rare circumstances. That work has been based largely on sample sizes too small to evaluate panels with a majority of women, or it simply did not evaluate them. Null results that do not isolate votes and outcomes when women are in a panel majority cannot foreclose the existence of large differences in preferences along gender lines, and they may reflect suppression of women's influence.

Although we find that the presence of one African American is associated with elevated rates of procertification votes and outcomes, we nevertheless believe that our gender results also counsel caution as to interpretation of null results associated with any minority judge characteristic (including race) in models that do not isolate votes and outcomes when the group is in the majority. Scholars understand little about mechanisms that underpin panel effects, and about when and why gender and race are associated with variation in judges' preferences across different substantive domains. It would be foolish to assume that the panel dynamics we observe with respect to gender in

class-certification decisions will never be present with respect to race in another field of law.

APPENDIX

PART I.A

We began by identifying every decision classified by the Westlaw headnote system as addressing any class action issue (there are thirty-three such headnotes) from 1966 to 2017. This yielded over 2,000 cases. Each case was read by a coder to determine if the court addressed whether to certify a class under Rule 23, and if so, the case was included in our data if published. We identified 1,139 such cases decided by three-judge panels, the first of which was decided in 1967.

With respect to unpublished cases, our goal was to identify years in which all (or substantially all) unpublished cases were available so as to create a dataset that was not vulnerable to selection bias as a result of studying only published decisions or some but not all (or substantially all) unpublished decisions. By 2002, with the exception of the Fifth and Eleventh Circuits, the full text of “nearly every federal appellate unpublished opinion” was provided to Westlaw and included in the Federal Appendix, and West published these opinions in the same manner as ordinary published opinions in that “West’s attorneys assigned headnotes, topics, and key numbers to the cases.”¹²⁴ The Fifth and Eleventh Circuits’ unpublished opinions became consistently available in 2003 and 2005, respectively.¹²⁵ However, we observed that some unpublished summary dispositions of appeals of certification decisions lack sufficient legal discussion to receive headnote classifications. We used word searches to identify these cases and added them to the data. For the circuit years in which all (or substantially all) unpublished cases are available—2003–2017 for the Fifth Circuit, 2005–2017 for the Eleventh Circuit, and 2002–2017 for the rest—we identified 205 unpublished cases decided by three-judge panels in which the court ruled on whether a class should be certified under Rule 23.¹²⁶

This produced a total of 1,344 published and unpublished cases decided by three-judge panels. From here we lost 67 cases due to missing values on some variable in the model. This was because the outcome variable on the Court of Appeals could not be characterized as a plaintiff or defendant win (37 cases); likewise for the direction of the district court decision (19 cases); there were missing votes because an originally assigned judge became una-

124. Solomon, *supra* note 72, at 205–07.

125. *Id.*

126. Recent research on immigration appeals casts doubt on the completeness of unpublished opinions in that domain. See Michael Kagan, Rebecca Gill & Fatma Marouf, *Invisible Adjudication in the U.S. Courts of Appeals*, 106 GEO. L.J. 683 (2018). The authors acknowledge, however, that this may not be a general phenomenon, noting, among other things, the sheer volume of immigration appeals and the fact that they involve review of administrative determinations (without earlier consideration by an Article III court). *Id.* at 699–700. We are unable to evaluate the implications of this research for class-certification decisions. We have no reason to believe that gaps, if any, are correlated with panel composition.

available before the case was decided (such as by death) and it was disposed of by the remaining two (10 cases); and 1 case had a missing value on the law-type variables.

PART I.B

In all of the statistical models reported below, the following control variables are included:

- *TRIAL COURT OUTCOME*: Indicator variable reflecting whether the trial court certified the class (or portion of the class) that is under consideration by the Court of Appeals.
- *TRIAL JUDGE SITTING BY DESIGNATION*: Indicator variable recording whether a judge was a trial judge sitting by designation in the individual-level model (Table A-1), or whether there was a trial judge sitting by designation on the panel in the panel-level vote and outcome models (Tables A-2 and A-3).¹²⁷
- *DEFENDANT TYPE*: Non-mutually exclusive indicator variables measuring whether certification was sought with respect to a federal defendant, state defendant, business defendant, or other type of defendant.
- *LAW TYPE*: Mutually exclusive indicator variables measuring whether certification was sought for claims arising under federal law, state law, or both.
- *CLASS TYPE*: Mutually exclusive indicator variables measuring whether certification was sought for a plaintiff class, a defendant class, or both.
- *POLICY AREA*: Mutually exclusive indicator variables reflecting policy area. Our policy classifications are: civil rights-discrimination, civil rights-prisoner, civil rights-other, labor and employment, consumer, product liability, environmental and toxic substances, antitrust, securities, insurance, and public benefits. Remaining policy areas each comprised less than 2% of the data, and we aggregated them into an “other” policy category.
- *CERTIFICATION VERSUS DECERTIFICATION*: Indicator variable recording whether the court was deciding a motion to certify or a motion to decertify.
- *INTERLOCUTORY*: Indicator variable measuring whether the appeal of the certification decision was interlocutory.

127. We say “trial judge” rather than district judge because judges from the Court of Claims and the International Court of Trade also sit by designation. In alternative specifications, we also examined models with a control for any judge not from the circuit that decided the case, including both trial judges and visiting appellate judges, and this difference had no material effect on the results we report (not displayed).

- *CIRCUIT FIXED EFFECTS*: Circuit fixed effects (dummy variables for each circuit) account for any time-varying covariates that take the same value for each judge on a panel within the circuit.
- *YEAR FIXED EFFECTS*: Year fixed effects (dummy variables for each year) account for any time-varying covariates that take the same value for each judge on a panel within the year.

PART I.C

Rule 23(f), adopted in 1998, created a vehicle to petition for interlocutory review of a certification decision.¹²⁸ We understand that in at least some circuits a randomly constituted (or “as-if” randomly constituted) motions panel that is assigned a Rule 23(f) petition has discretion to elect to, or request permission to, proceed to the merits of the certification issue on grounds of judicial economy rather than having the merits of the certification decision randomly assigned to a merits panel.¹²⁹ Commentators have observed this about the Seventh Circuit,¹³⁰ and we do not know the extent to which it occurs elsewhere. Though Professor Sachs finds that this practice “appear[s] to be confined almost exclusively to the Seventh Circuit,” she does observe a very small number of instances in which it occurred outside the Seventh Circuit.¹³¹ The operation of this practice would not change our finding that panels with Democratic majorities, two women, and one African American are more likely to rule in a procertification direction. It would change only the proper description of the causal process generating the result.

If the appeal of the merits of the certification issue is randomly assigned in all cases (no retention after a Rule 23(f) grant), a statistically significant difference between types of panels in their probability of a procertification outcome allows us to conclude that the two types of panels, on average, decide differently *in the equivalent body of certification issues*. In contrast, if the initial random assignment of a Rule 23(f) petition allows the panel to either deny the appeal or grant it and, in some cases, proceed to the merits of the certification issue, a statistically significant difference between two panel types in probability of procertification outcome allows the inference that they have a different probability of rendering such outcomes *in an equivalent body of ini-*

128. FED. R. CIV. P. 23(f) advisory committee’s note to 1998 amendment. In the 2002–2017 period, our data on published and unpublished cases contained one other vehicle for interlocutory review—28 U.S.C. § 1292. Two percent of cases in that data identified § 1292 as the sole basis for interlocutory review, and another 5% cited both 28 U.S.C. § 1292 and Rule 23(f). In our empirical models we defined the interlocutory variable as any interlocutory appeal.

129. See, e.g., *Hughes v. Kore of Ind. Enter., Inc.*, 731 F.3d 672 (7th Cir. 2013).

130. Margaret V. Sachs, *Superstar Judges as Entrepreneurs: The Untold Story of Fraud-on-the-Market*, 48 U.C. DAVIS L. REV. 1207, 1233–34 (2015); see also James C. Schroeder, *The Seventh Circuit’s Unique Approach to Handling Rule 23(f) Petitions*, CLASS DEF. BLOG (Oct. 15, 2013), <https://www.classdefenseblog.com/2013/10/the-seventh-circuits-unique-approach-to-handling-rule-23f-petitions/> [<https://perma.cc/5555-3Y3C>].

131. Sachs, *supra* note 130, at 1234.

tial assignments. That body of assignments is a combination of post-final judgment appeals and 23(f) petitions, which are opportunities to reach the merits. In the scenario in which all certification-merits questions are randomly assigned (no retention of cases after a 23(f) grant), the effect captured by the difference in probability would arise only from the panel-identity characteristics. In the scenario in which certification-merits questions include ones that panels retained after granting a 23(f) petition—if 23(f) is used to channel different types of cases to different types of panels—the causal process would be a combination of panel characteristics and use of opportunities given by Rule 23(f). In both scenarios, random assignment to different panel types is associated with variation in the probability of certification. Because we include circuit and year fixed effects, we only compare outcomes issued by panels governed by the same assignment practices.

In fact, we find no evidence that selection of cases under Rule 23(f) is occurring in the data. Some of the reasons commonly understood to have motivated the rule's adoption suggest the possibility of a specific selection story. The rule was intended, in part, to address the perception that if the district court certified, defendants often faced heavy pressure to settle, and if the district court denied certification, plaintiffs often lacked sufficient incentive to proceed, and these dynamics substantially insulated the district court's certification decision from appellate review after a final judgment.¹³² In light of these reasons, if panels that decide a Rule 23(f) petition can retain the case for disposition of the certification issue, the following selection process could be at play. More procertification panels, on average, would be more likely to grant 23(f) petitions and reverse when the district court denied certification, knowing that cases in which it granted certification would likely settle. More anticertification panels, on average, would be more likely to grant 23(f) petitions and reverse when the district court granted certification, knowing that cases in which it denied certification would likely settle.

Put simply, and quite plausibly we think, if panels are allowed to grant 23(f) petitions and retain the appeal, they may be more likely to review and reverse decisions that are, on average, contrary to their presumed preferences. This does not happen in our data. We regressed the variable measuring whether an appeal was interlocutory on each panel type with more than twenty cases in the data (i.e., two Democrats, two women, one African American), with year and circuit fixed effects. No such panel types were statistically significantly associated with interlocutory appeals. We also regressed the interlocutory appeal variable on all panel types simultaneously, with year and circuit fixed effects, and found them to be jointly insignificant with an F-test. These individual and joint tests on the association between panel types and interlocutory appeals were performed on (1) all published and unpublished cases in 2002–2017, (2) such cases but only if the district court certified, and (3) such cases but only if the district court denied certification. Finally, because we are aware that the Seventh Circuit gives panels that grant 23(f) peti-

132. See FED. R. CIV. P. 23(f) advisory committee's note to 1998 amendment.

tions discretion to keep the cases, we reran the models of all published and unpublished cases dropping the Seventh Circuit. The results for panels with two or three Democrats, two women, and one African American were robust in terms of significance and magnitude (the marginal effect was equal or slightly larger for all these panel types).

PART I.D

TABLE A-1: LOGIT MODEL OF PANEL EFFECTS IN CERTIFICATION VOTES

	<i>Model A</i> 1967–2017 <i>Published</i>	<i>Model B</i> 1967–1994 <i>Published</i>	<i>Model C</i> 1995–2017 <i>Published</i>	<i>Model D</i> 2002–2017 <i>All Cases</i>
<i>Democrat</i>	.53*** (.08)	.42*** (.12)	.59*** (.12)	.59*** (.12)
<i>Woman</i>	.19 (.12)	.09 (.27)	.22* (.13)	.23* (.12)
<i>African American</i>	.25 (.17)	.36 (.25)	.40* (.22)	.33* (.19)
All models include circuit fixed effects, year fixed effects, and independent variables measuring policy area, direction of the trial court outcome, trial judge sitting by designation, defendant type (federal government, state government, business, other), law type (federal law, state law, both), type of class for which certification was sought (plaintiff, defendant, both), whether the motion was for certification or decertification, and whether the appeal was interlocutory. Model D additionally contains a variable indicating whether the case was published.				
N=	3,296	1,732	1,547	1,772
Pseudo R ² =	.15	.23	.15	.20
***p < .01; **p < .05; *p < .1 Standard errors in parentheses, clustered on case.				

TABLE A-2: LOGIT MODEL OF PANEL EFFECTS IN CERTIFICATION OUTCOMES

	<i>Model A</i> 1967–2017 Published	<i>Model B</i> 1967–1994 Published	<i>Model C</i> 1995–2017 Published	<i>Model D</i> 2002–2017 All Cases	<i>Model E</i> 2002–2017 All Cases No Discrim.	<i>Model F</i> 2002–2017 All Cases No Civ. Rts.
PARTY						
<i>3 Republicans (reference)</i>						
1 Dem, 2 Reps	.46** (.22)	.62* (.36)	.19 (.31)	-.05 (.33)	-.12 (.34)	-.01 (.38)
2 Dems, 1 Rep	.99*** (.23)	1.12*** (.38)	.88*** (.34)	.95*** (.35)	.82** (.37)	1.05*** (.41)
3 Dems	1.11*** (.31)	.90* (.46)	1.29** (.54)	1.34*** (.49)	1.31*** (.51)	1.83*** (.56)
GENDER						
<i>3 Men (reference)</i>						
1 Wom, 2 Men	.14 (.19)	.18 (.37)	.18 (.25)	.12 (.25)	.07 (.26)	.02 (.28)
2 Wom, 1 Man	.91*** (.34)	1.71 (1.58)	.94** (.37)	.87*** (.33)	.89*** (.34)	.72** (.36)
3 Women	—	—	—	-1.56 (1.35)	-1.68 (1.36)	-1.70 (1.38)
RACE						
<i>3 White/Others (reference)</i>						
1 Af Am, 2 WOs	.48** (.22)	.42 (.37)	.82*** (.30)	.73*** (.28)	.75*** (.29)	.80** (.32)
2 Af Ams, 1WO	.04 (.77)	2.14 (1.66)	-.39 (.89)	-.28 (.79)	-.39 (.82)	-.26 (.99)
3 Af Ams	—	—	—	—	—	—
All models include circuit fixed effects, year fixed effects, and independent variables measuring policy area, direction of the trial court outcome, trial judge sitting by designation, defendant type (federal government, state government, business, other), law type (federal law, state law, both), type of class for which certification was sought (plaintiff, defendant, both), whether the motion was for certification or decertification, and whether the appeal was interlocutory. Models D, E, and F additionally contain a variable indicating whether the case was published.						
N=	1085	567	511	586	528	462
Pseudo R ² =	.17	.25	.18	.23	.23	.23
***p < .01; **p < .05; *p < .1 Standard errors in parentheses, clustered on case.						

TABLE A-3: LOGIT MODEL OF PANEL EFFECTS IN CERTIFICATION VOTES

	<i>Model A 1967-2017 Published</i>	<i>Model B 2002-2017 All Cases</i>	<i>Model C 2002-2017 All Cases No Civ. Rts.</i>
PARTY			
<i>Rep voting with 2Rs (All Republican Panels) (reference)</i>			
Rep voting with 1R & 1D	.19 (.28)	-.07 (.31)	-.01 (.35)
Dem voting with 2Rs	.56** (.29)	.23 (.32)	.28 (.35)
Rep voting with 2Ds	.53* (.32)	.76** (.33)	.97*** (.38)
Dem voting with 1D & 1R	.92*** (.32)	1.01*** (.33)	1.09*** (.37)
Dem voting with 2Ds (All Democratic Panels)	1.31** (.52)	1.34*** (.48)	1.83*** (.55)
GENDER			
<i>Man voting with 2 Ms (All Male Panels) (reference)</i>			
Man voting with 1M & 1W	.24 (.23)	.12 (.24)	-.02 (.27)
Wom voting with 2Ms	.18 (.23)	.08 (.24)	.02 (.27)
Man voting with 2Ws	1.00*** (.36)	.99*** (.32)	.83** (.34)
Wom voting with 1W & 1M	.91** (.36)	.88*** (.31)	.73** (.34)
Wom voting with 2Ws (All Woman Panels)	—	-1.67 (1.51)	-1.74 (1.43)
RACE			
<i>White/Other voting with 2 WOs (All White/ Other Panels) (reference)</i>			
White/Other voting with 1WO & 1AA	.70*** (.27)	.67*** (.24)	.78*** (.28)
Af Am voting with 2WOs	.74*** (.28)	.72*** (.25)	.77*** (.29)
White/Other voting with 2AAs	-.94 (.76)	-.84 (.63)	-.33 (.82)
Af Am voting with 1AA & 1WO	-.39 (.78)	-.62 (.61)	-.66 (.81)
Af Am voting with 2AAs (All Af Am Panels)	—	—	—
All models include circuit fixed effects, year fixed effects, and independent variables measuring policy area, direction of the trial court outcome, trial judge sitting by designation, defendant type (federal government, state government, business, other), law type (federal law, state law, both), type of class for which certification was sought (plaintiff, defendant, both), whether the motion was for certification or decertification, and whether the appeal was interlocutory. Models B and C additionally contain a variable indicating whether the case was published.			

TABLE A-3 CONTINUED

	<i>Model A 1967-2017 Published</i>	<i>Model B 2002-2017 All Cases</i>	<i>Model C 2002-2017 All Cases No Civ. Rts.</i>
N=	1,535	1,758	1,386
Pseudo R ² =	.17	.23	.23
***p < .01; **p < .05; *p < .1 Standard errors in parentheses, clustered on case.			

TABLE A-4: PREDICTED PROBABILITIES OF PROCERTIFICATION VOTES FOR PARTY, GENDER, AND RACE PANEL COMBINATIONS

	<i>Model A 1967–2017 Published</i>	<i>Model B 2002–2017 All Cases</i>	<i>Model C 2002–2017 All Cases No Civ. Rts.</i>
<p>“—” indicates that panel type is not statistically distinguishable from the reference category (in italics). ** indicates no cases in model.</p>			
PARTY			
<i>Rep voting with 2Rs (All Republican Panels)</i>	23%	20%	17%
Rep voting with 1R & 1D	—	—	—
Dem voting with 2Rs	50%	—	—
Rep voting with 2Ds	50%	48%	53%
Dem voting with 1D & 1R	55%	50%	53%
Dem voting with 2Ds (All Democratic Panels)	64%	58%	67%
GENDER			
<i>Man voting with 2Ms (All Male Panels)</i>	31%	27%	30%
Man voting with 1M & 1W	—	—	—
Wom voting with 2Ms	—	—	—
Man voting with 2Ws	60%	53%	52%
Wom voting with 1W & 1M	57%	50%	50%
Wom voting with 2Ws (All Woman Panels)	**	—	—
RACE			
<i>White/Other voting with 2 WOs (All White/Other Panels)</i>	38%	34%	36%
White/Other voting with 1WO & 1AA	53%	47%	50%
Af Am voting with 2 WOs	54%	48%	51%
White/Other voting with 2AAs	—	—	—
Af Am voting with 1AA & 1WO	—	—	—
Af Am voting with 2AAs (All Af Am Panels)	**	**	**

PART II

An individual vote-level model of panel effects requires that we disaggregate the party, gender, and race variables. Our approach is to create variables that capture the identity of the voting judge and the characteristics of her colleagues on the panel. This requires that each variable measuring a characteristic (party, gender, race) be disaggregated into six variables. Table A-5 defines each of the six variables associated with party, gender, and race panel effects. Although the table is labored, the information is necessary in order to understand the textured information conveyed by the regression models. For each set of indicator variables, we designate the reference category with the “reference” parenthetical.

TABLE A-5: PANEL VARIABLES FOR PARTY, GENDER, AND RACE

Variable Description	Variable Name
Republican Majority Panels	
Republican voting with 2 other Republicans (reference)	Rep voting with 2Rs
Republican voting with 1 Republican & 1 Democrat	Rep voting with 1R & 1D
Democrat voting with 2 Republicans	Dem voting with 2Rs
Democratic Majority Panels	
Republican voting with 2 Democrats	Rep voting with 2Ds
Democrat voting with 1 Democrat & 1 Republican	Dem voting with 1D & 1R
Democrat voting with 2 other Democrats	Dem voting with 2Ds
Male Majority Panels	
Man voting with 2 other Men (reference)	Man voting with 2Ms
Man voting with 1 Man & 1 Woman	Man voting with 1M & 1W
Woman voting with 2 Men	Wom voting with 2Ms
Female Majority Panels	
Man voting with 2 Women	Man voting with 2Ws
Woman voting with 1 Woman & 1 Man	Wom voting with 1W & 1M
Woman voting with 2 other Women	Wom voting with 2Ws
White/Other Majority Panels	
White/Other voting with 2 other White/Others (reference)	White/Other voting with 2WOs
White/Other voting with 1 White/Other & 1 African American	White/Other voting with 1WO & 1AA
African American voting with 2 White/Others	Af Am voting with 2WOs
African American Majority Panels	
White/Other voting with 2 African Americans	White/Other voting with 2AAs
African American voting with 1 African American & 1 White/Other	Af Am voting with 1AA & 1WO
African American voting with 2 other African Americans	Af Am voting with 2AAs

PART II.A: PARTY

We replicated all of the models in Table A-2, but with the individual-level panel variables substituted for the case-level variables, and the results we ob-

serve are entirely consistent with the outcome models in terms of both significance and magnitude. We focus here on models that we regard as most significant. Table A-3 presents vote-level models of published cases in 1995–2017 (Model A), all published and unpublished cases in 2002–2017 (Model B), and published and unpublished cases in 2002–2017 after excluding all discrimination and other civil rights claims (Model C). Using these model results, we computed predicted probabilities of procertification votes for each of the judge-party panel combinations that were statistically distinguishable from votes on all-Republican panels, and they are displayed in Table A-4 (Part I.D of this Appendix). Not surprisingly in light of 98% unanimity in the cases, they look very similar to case outcome probabilities. The switch from a Republican voting on an all-Republican panel to a Democrat voting on an all-Democratic panel is dramatic. The probability of a procertification vote grows by 41 percentage points in the 1995–2017 model of published cases, 38 in the 2002–2017 model of published and unpublished cases, and a striking 50 in the same model but after excluding discrimination and other civil rights claims. Mixed panels have levels of procertification voting between these two poles.

Also consistent with the outcome models in 1995–2017 (published) and 2002–2017 (published and unpublished), in all three vote-level models the panels are symmetrically majoritarian. The insignificance of *REP VOTING WITH 1R & 1D* shows that a single Democrat fails to discernably affect the votes of Republicans in the panel majority relative to how they vote on all-Republican panels. In alternative specifications leaving out all-Democratic panels as the reference, we likewise observe that a single Republican fails to affect the votes of Democrats in the panel majority relative to how they vote on all-Democratic panels (not displayed).

PART II.B: GENDER

For the gender panel variables, a man voting on a panel with two other men is the reference category. Controlling for partisan and racial panel composition, and the variables listed in Part I.B of the Appendix, the variable capturing the votes of men serving on a panel with one woman (*MAN VOTING WITH 1M & 1W*) is insignificant in all three models, indicating that they are no more likely to vote in a procertification direction than when serving on a panel with two other men. Likewise, the variable capturing a woman sitting with two men (*WOM VOTING WITH 2Ms*) is insignificant in all three models, indicating that they are no more likely to vote in a procertification direction than a man serving on a panel with two other men. These two variables capture the same panels (with two men and one woman) and separately measure votes of men and women as panel members, showing that neither is statistically distinguishable from the votes of men on panels with three men.

In sharp contrast, when there are two women on a panel, the variable measuring the vote of the man serving with them (*MAN VOTING WITH 2Ws*) is statistically significant, positive, and large in magnitude, indicating that men on such panels are materially more likely to vote in a procertification direction as compared to when serving with two other men. Likewise, the variable

measuring the vote of a woman serving on a panel with one other woman (*WOM WITH 1W & 1M*) is statistically significantly larger than the votes of men on panels with three men. These two variables capture the same panels (with two women and one man) and separately measure the votes of men and women as panel members, showing that both are materially more likely to cast procertification votes than a man on a panel with two other men. On these panels, men and women vote in a procertification direction at approximately the same rate, which is consistent with the high level of unanimity in the data. The predicted probabilities displayed in Table A-4 (Part I.C of this Appendix) show that the effect sizes are very similar to those associated with panels with two women in the outcome model. The switch from a man voting on a panel with two other men to a man (woman) voting on a panel with two women is associated with a growth in the probability of a procertification vote by 29 (26) percentage points in the 1995–2017 model of published cases, 26 (23) in the 2002–2017 model of published and unpublished cases, and 22 (20) in the same model but after excluding discrimination and other civil rights claims.

In order to assess the relationship between gender panel composition and dissenting behavior, we ran the models in Table A-2, Models A and B, but substituting a variable indicating when a judge dissented as the dependent variable (not displayed). All of the gender panel variables (including the one designating a woman in the panel minority) were clearly insignificant. The gender composition of the panel is not associated with the dissenting behavior of men or women (not displayed).

PART II.C: RACE

Controlling for the partisan and gender composition of the panel, and the variables listed in Part I.B of the Appendix, the race panel variables show quite different patterns as compared to the gender panel variables, tracking what we observed in the case outcome model. The variable capturing the votes of white/other judges serving on a panel with one African American (*WHITE/OTHER VOTING WITH 1WO & 1AA*) is statistically significant in all three models, indicating that they are more likely to cast procertification votes than when serving on an all-white/other panel. Likewise, the variable capturing the votes of an African American sitting with two white/other judges (*AF AM VOTING WITH 2WOS*) is significant, indicating that they are also more likely to cast procertification votes than a white/other judge serving on an all-white/other panel. These two variables capture the same panels (with one African American and two white/other judges) and separately measure votes of the African American and white/other panel members, showing that both are statistically distinguishable from the votes of white/other judges on all-white/other panels. The predicted probabilities displayed in Table A-4 (Part I.D of this Appendix) show that the effect sizes are very similar to those associated with panels with one African American in the outcome model. The switch from a white/other judge voting on an all-white/other panel to a white/other (African American) voting on a panel with one African American

is associated with a growth in the probability of a procertification vote by 15 (16) percentage points in the 1995–2017 model of published cases, 13 (14) in the 2002–2017 model of published and unpublished cases, and 14 (15) in the same model but after excluding discrimination and other civil rights claims.

In contrast, when there are two African Americans on a panel, the variables measuring the votes of all judges are statistically indistinguishable from the votes of white/other judges on all-white/other panels. However, there are only eleven such cases in the data. We simply don't have enough data to provide meaningful estimates of voting under this panel configuration. As was true in the outcome models, there are no race panel effects if we pool all nonwhite judges into a single racial minority category. The race panel effects emerge only with respect to African Americans (not displayed). The presence of one African American on the panel is not associated with the dissenting behavior of white/other or African American judges, and we lack the data evaluate this with respect to panels with two African Americans (not displayed).

PART III

In order to evaluate whether women from a particular political party have a distinctive probability of procertification votes that is not captured by the direct effects of party and gender, we examined interactions that isolate specific party-gender combinations. In the 2002–2017 model of votes in all cases, with gender and race panel variables, we substituted a simple party dichotomous variable for the party panel variables and interacted it with the panel variables for a woman voting on a panel with one woman, and for a woman voting on a panel with two women. The interactions isolate whether there are distinctive effects on procertification voting associated with Democratic women or Republican women. The interactions were insignificant, indicating no positive or negative change in the probability of procertification votes associated with women from one political party not already captured by the direct effects of party and gender (not displayed).

Likewise, we interacted the party variable with the variable capturing one African American judge voting on panels with one African American. The interaction isolates whether there are distinctive effects on procertification voting associated with Democratic African American judges or Republican African American judges. This interaction was also insignificant, indicating that neither African American Democrats nor African American Republicans had a positive or negative change in probability of procertification votes not captured by the direct effects of party and race. In these models with interactions, the variables for a man and a woman voting on panels with two women, and for a white/other and an African American judge voting on panels with one African American, remain significant, positive, and of comparable magnitude as in Model B in Table A-3 (with party panel variables, and without the interactions) (not displayed).

In order to evaluate whether African American judges of a particular gender have a distinctive probability of procertification votes that is not cap-

tured by the direct effects of race and gender, we examined interactions which isolate specific race-gender combinations. In the 2002–2017 model of votes in all cases reported in Model B in Table A-3, we added interactions of the variable identifying African Americans voting on a panel with one African American, with the variables identifying a woman voting on panels with one woman, and a woman voting on panels with two women. The interactions isolate whether there are distinctive effects on procertification voting associated with African American men or African American women. The interactions were insignificant, indicating no positive or negative change in the probability of procertification votes associated with African Americans of a particular gender not already captured by the direct effects of race and gender. However, and importantly, there are so few African American women in the data that we regard this as inconclusive (not displayed).

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