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Politics, Identity, and Class Certification on the U.S. Courts of Appeals

Stephen B. Burbank & Sean Farhang†

Abstract

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 precedential lawmaking on class certification under Rule 23. We find that the partisan 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 more than double the certification rate of all-Republican panels in precedential cases. We also find that the presence of one African American on a panel, and the presence of two females (but not one), is associated with pro-certification outcomes. Contrary to conventional wisdom in the scholarship on diversity on the bench, such diversity may be consequential to lawmaking beyond policy areas conventionally thought to be of particular concern to women and racial minorities.

Class action doctrine is a form of trans-substantive procedural law that traverses many policy areas. The effects of gender and racial diversity on the bench, through making more pro-certification law, radiate widely across the legal landscape, influencing implementation of consumer, securities, labor and employment, antitrust, prisoner's rights, public benefits, and many other areas of law. 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 trans-substantive 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 anti-discrimination law found that one woman can influence the votes of males in the majority (mirroring what we find with respect to African American judges 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 more normatively troubling. We observe that women have more pro-certification preferences based on outcomes when they are in the majority. However, panels with one female are not more likely to yield pro-certification outcomes. Female majority panels occur at sharply lower rates than women's percentage of judgeships, and thus certification doctrine underrepresents their preferences relative to their share of judgeships.

Our suggestions regarding mechanisms that may help to explain these results are speculative and tentative. Recent scholarship on the gender gap in political discussions and decision-making illuminates some disquieting possibilities. If the dynamics identified by this research are at play, one possibility is that a female judge in the minority who vigorously advocates for a preferred outcome is less successful because, as a panel minority in a substantive domain that, unlike anti-discrimination law, does not elicit gender-based deference, she is regarded as less authoritative and influential. Another is that the reinforcement of a female majority increases her propensity to advocate preferences that differ systematically from those of her male colleagues in areas without obvious gender salience.

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 politically 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 substantive

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

decision-making, actually represent the distinctive preferences or interests of a community that they are associated with.

Advocates of increasing, and scholars studying, the representation of women and 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.² Another purpose concerns legal substance. Some believe that women and racial minority judges have different preferences that are potentially consequential to case outcomes, and in particular that they are more sensitive than white males to issues of discrimination and inequality in their substantive decision-making.³ The primary reason given for this view is that women and racial minority judges are more likely to have seen or been subjected to discrimination, and these distinctive life experiences make them more likely to believe a plaintiff's evidence of discrimination and to empathize with such plaintiffs.⁴

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 percent white and 76 percent male.⁵ 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

² See Allison P. Harris and Maya Sen, *Bias and Judging*, 22 ANN. REV. POL. SCI. 241 (2019); SUSAN B. HAIRE AND LAURA P. MOYER, *DIVERSITY MATTERS: JUDICIAL POLICY MAKING IN THE U.S. COURT OF APPEALS* (2015); Susan M. Smith, *Diversifying the Judiciary: The Influence of Gender and Race on Judging*, 28 U. RICH. L. REV. 179, 198 (1994); Carl Tobias, *The Gender Gap on the Federal Bench*, 19 Hofstra L. Rev. 171, 177 (1990).

³ See HAIRE AND MOYER, *supra* note 2, 6, 13-114; Christina Boyd, Lee Epstein, and Andrew D. Martin, *Untangling the Causal Effect of Sex on Judging*, 54 AM. J. OF 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); Theresa M. Beiner, *What Will Diversity on the Bench Mean for Justice?*, 6 MICH. J. GENDER & L. 113 (1999).

⁴ See, e.g., HAIRE AND MOYER, *supra* note 2, 32, 48; Boyd, Epstein, and Martin, *supra* note 3; Joy Milligan, *Pluralism in America: Why Judicial Diversity Improves Legal Decisions About Political Morality*, 81 N.Y.U. L. REV. 1206 (2006); Ifill, *supra* note 3.

⁵ See Stacy Hawkins, *Trump's Dangerous Judicial Legacy*, 67 U.C.L.A. L. REV. DISC. 20, 30 (2019). As of July 12, 2019, 42 of Trump's nominees to the Courts of Appeals had been confirmed, of whom 86% were white and 79% were male. There are no African-Americans or Hispanics in this group. Six of them are Asian-Americans.

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 decades-long trend by appointing approximately 70 percent white male judges to the federal bench.⁶

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-making on the U.S. Courts of Appeals.⁷ 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. Yet, 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 male and female judges in abortion and sexual harassment cases,⁸ or white and racial minority judges in employment discrimination cases,⁹ or Republican and Democratic appointees in cases addressing criminal

⁶ *Id.* at 31.

⁷ See, e.g., Richard Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997); Frank B. Cross and Emerson H. Tiller, *Judicial Partnership and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155 (1998); Sean Farhang and Gregory Wawro, *Institutional Dynamics on the U.S. Court of Appeals: Minority Representation Under Panel Decision-Making*, 20 J.L. ECON. & ORG. 299 (2004); Jennifer L. Peresie, *Female Judges Matter: Gender and Collegial Decisionmaking in the Federal Appellate Courts*, 114 Yale L.J. 1759 (2005); Adam B. Cox and Thomas J. Miles, *Judging the Voting Rights Act*, 108 COLUM. L. REV. 1 (2008); Boyd, Epstein, and Martin, *supra* note 3; Jonathan P. Kastellec, *Racial Diversity and Judicial Influence on Appellate Courts*, 57 AM. J. OF POL. SCI 167 (2013); HAIRE AND MOYER, *supra* note 2.

⁸ See Boyd, Epstein, and Martin, *supra* note 3.

⁹ See Farhang and Wawro, *supra* note 7; Peresie, *supra* note 7.

appeals, governmental takings of private property, and Commerce Clause challenges to national legislation.¹⁰ Careful empirical scholarship is required to map the terrain where judge characteristics matter and where they don't.

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, when allowed, 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.

The neglect of gender and race as possible influences on class certification decisions may arise from an 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.¹¹ Because of this view, we surmise, scholars interested in the effects of gender and racial diversity on the bench have not regarded procedural law as a productive avenue of inquiry, even procedural law (like Rule 23) that importantly affects access to justice and does so across substantive domains.¹²

In Part I, we briefly review the literature on Court of Appeals decision-making that we build on. We emphasize three 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

¹⁰ See CASS R. SUNSTEIN, DAVID SCHKADE, LISA M. ELLMAN, AND ANDRES SAWICKI, *ARE JUDGES POLITICAL?: AN EMPIRICAL ANALYSIS OF THE FEDERAL JUDICIARY* 149 (2006).

¹¹ See Peresie, *supra* note 7, 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.”).

¹² Recognition of this reality did, however, cause two scholars to assimilate some procedural rulings to merits rulings. See Sepehr Shahshahani and Lawrence Liu, *Religion and Judging on the Federal Court 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.”). 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.

judges' preferences (measured by characteristics) often have material influence on outcomes by the way they influence the votes of co-panelists.

Second, studies focusing on discrete types of civil rights claims show that panels with one woman or African American judge are more likely to produce pro-civil rights outcomes as compared to all-male or all-white panels, providing systematic evidence that minority group judges can powerfully 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, nonwhites, and (theoretically) ideological minorities, 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.

Third, this and other research on the U.S. Courts of Appeals that finds variation along gender or racial lines has clustered heavily in areas relating to discrimination and inequality with clear gender or racial salience. As we have noted, this appears to reflect a scholarly consensus that the impact of gender or racial diversity on the Courts of Appeals' substantive decision-making is restricted to this relatively narrow band of its docket.

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 not affect outcomes and when they do. 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. As already noted, multiple studies focused on civil rights cases have found that a single woman or African American can influence the votes of males and whites.

Part III contains our core contributions. We rely on an original and comprehensive dataset of precedential Court of Appeals panel decisions addressing whether or not to certify a class under Rule 23 that spans 1967 to 2017 and contains over 1,100 decisions and over 3,200 votes on certification. 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 more than double the rate of all-Republican panels. Comparing the 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 some of the most ideologically contentious issues of our day, and that it is larger than, for example, outcomes in

capital punishment, employment discrimination, desegregation, and abortion cases. 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.¹³

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 female judge 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 female on a panel, relative to none, is not associated with an increased probability of a pro-certification outcome. This does not mean, however, that women do not have more pro-certification preferences. When two women serve on a panel, forming a majority, its rate of pro-certification outcomes is 50 percent larger than on all-male panels. This result departs sharply from conventional wisdom in the Court of Appeals literature that when women or racial minorities have different preferences than male and white judges, some pathway (or pathways) allow 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 female majority panels in our data is less than 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 the law of certification relative to their numbers on the bench, a bench that already underrepresents women.

These results call into question a great deal of Court of Appeals scholarship (every study that we have found), which concludes that, in many discrete policy areas, women and racial minority judges do not have different preferences than male and white judges. The inferences in these studies were drawn from empirical models in which, like our gender results, 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-

¹³ Our prior work on the Supreme Court's decisions interpreting Federal Rules that implicate private enforcement (including Rule 23) shows that after 1995 the justices' votes in such cases were more strongly associated with ideology than they were either in private enforcement cases generally or in merits cases involving the same policy issues. *See* STEPHEN B. BURBANK AND 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).

majority group panels, but the researchers did not separately evaluate panels with a *majority* of minority group judges.

Earlier studies appear to have assumed that differences between minority and majority group judges' preferences, if they existed, would be evident in individual-level vote models, or in cases with one minority group judge on a panel. That is, they 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 existing scholarship allow us to identify the reasons for female and African American judges' different preferences 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 pro-certification voting and outcomes. We do, however, offer speculations on both questions as a possible guide for additional research.

With respect to different preferences on class certification, the dominant view in the literature is that gender and racial diversity matter to lawmaking only in a narrow slice of the federal docket implicating discrimination or inequality with clear gender or racial salience. To the contrary, we show that such diversity is consequential to lawmaking far beyond this domain. In considering why that may be true, it is important to recall that class action doctrine is a form of trans-substantive procedural law that traverses many policy areas, such that the effects of diversity on the bench, through making more pro-certification law, radiate widely across the legal landscape, influencing implementation of consumer, securities, labor and employment, antitrust, prisoners' rights, public benefits, and many other areas of law.

One important insight of this Article is that trans-substantive procedural law, which can profoundly enable or constrict access to justice, and which until now has been ignored in the literature on judicial diversity, can act as a transmission belt that conveys the substantive effects of diversity across the landscape of American regulatory law. Court of Appeals judges understand that the Federal Rules of Civil Procedure are trans-substantive, 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 trans-substantive procedural law affecting access to justice is itself a policy domain in which minority group judges 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 pro-certification voting and outcomes are even more speculative and tentative. Recent scholarship on the gender gap in political discussions and decision-making illuminates some disquieting possibilities. If the dynamics identified by this research are at play, one possibility is that a female judge in the minority who

vigorously advocates for a preferred outcome is less successful because, as a panel minority in a substantive domain that, unlike employment discrimination, does not elicit gender-based deference, she is regarded as less authoritative and influential. Another is that the reinforcement of a female majority increases her propensity to advocate preferences that differ systematically from those of her male colleagues in areas without obvious gender salience.

I. Studying the Influence of Court of Appeals Judge Characteristics at the Individual Level and the Panel Level

In studying the relationship between judge characteristics and class certification on the Courts of Appeals, we examine associations at both the individual judge level and the panel level. 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.¹⁴ The attitudinal model is oriented to explaining judicial decision-making based on "each judge's political ideology and the identity of the parties."¹⁵ This individualist orientation emphasizes the explanatory power of each judge's sincere preferences independently of strategic institutional considerations or of interactions with colleagues.

Beginning with landmark studies by Revesz (1997)¹⁶ and Cross and Tiller (1998),¹⁷ 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.¹⁸ These initial studies found that Court of Appeals judges' votes were influenced by the party of

¹⁴ See JEFFREY SEGAL AND HAROLD SPAETH, *THE SUPREME COURT AND THE ATTITUDINAL MODEL* (1993).

¹⁵ Frank B. Cross, *Political Science and the New Legal Realism: A Case of Unfortunate Interdisciplinary Ignorance*, 92 NW. U. L. REV. 251, 265 (1997).

¹⁶ Revesz, *supra* note 7.

¹⁷ Cross and Tiller, *supra* note 7.

¹⁸ 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." 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, 1330-31 (2009). See also Jonathan P. Kastellec, *Hierarchical and Collegial Politics on the U.S. Courts of Appeals*, 73 J. OF POL. 345, 349 (2011).

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, males serving on three-judge Court of Appeals panels with one female colleague were more likely to rule for the plaintiff than men serving on all male panels.²⁰ Similarly, one study found that in voting rights cases white judges on an appellate panel were more likely to vote in favor of liability when sitting with one racial minority judge,²¹ and another found that in affirmative action cases white judges 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 non-whites (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

¹⁹ See SUNSTEIN ET AL., *supra* note 10; FRANK B. CROSS, DECISION MAKING ON THE U.S. COURT OF APPEALS (2007).

²⁰ See Farhang and Wawro, *supra* note 7; Peresie, *supra* note 7; Boyd, Epstein, and Martin, *supra* note 3.

²¹ See Cox and Miles, *supra* note 7, at 45.

²² See Kastlelec, *supra* note 7. 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 12.

²³ See Kim, *supra* note 18, at 1322 n. 11 ("The fact that judges' votes are correlated 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."); BURBANK & FARHANG, *supra* note 13, at 149-50 ("To attribute the Court's decisions exclusively to the ideological preferences of the justices, however, would neglect 'the messiness of lived

The social scientific evidence relied on throughout this paper provides support for this view. Yet, as previously noted, research on the U.S. Courts of Appeals 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 find robust evidence that female judges vote differently than male judges in only one—gender-based employment discrimination claims.²⁶

They find that female judges do not vote differently than male judges 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 female judges do not vote differently than male judges in some areas that *do* implicate gender and discrimination, including abortion, sexual harassment, and affirmative action. Ultimately, their interpretation is that female judges vote differently, and influence male judges, in domains in which they “possess unique and valuable information emanating from shared professional

experience’ ... which teaches that judges ... make decisions based on a number of considerations, including the law as they understand it.”).

²⁴ See Farhang and Wawro, *supra* note 7 (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); Peresie, *supra* note 7 (same); Cox and Miles, *supra* note 7 (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); Kastlelec, *supra* note 7 (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); Gregory C. Sisk, Michael Heise, and Andrew P. Morriss, *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); HAIRE AND MOYER, *supra* note 2, 28-32 (finding that African American judges do not vote more liberally than white judges 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).

²⁵ See Boyd, Epstein, and Martin, *supra* note 3, 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 Donald R. Songer, Sue Davis and Susan Haire, *A Reappraisal of Diversification in the Federal Courts: Gender Effects in the Courts of Appeals*, 56 J. POL. 425 (1994); Farhang and Wawro, *supra* note 7; Peresie, *supra* note 7; Boyd, Epstein, and Martin provide no test of employment discrimination claims in general.

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 “the single exception” to the general rule that “women judges ... decide cases similarly to their male colleagues.”²⁸

II. Institutional Structure on the U.S. Court 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, nonwhites, and (theoretically) ideological minorities, 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 Appeal 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 15 judges, of whom two are racial minorities (13 percent), the probability of drawing a panel that has two racial minority judges is about three percent. If three members of the circuit are women (20 percent), only eight percent of panels will be majority female.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 *Id.* at 391–92. 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 AND MOYER, *supra* note 2, 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, the preferences of each majority group judge will be most proximate to the other. 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 aggregated across all circuits 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

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

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

minority dissents avoided through a process 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 Court 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

³³ See Kim, *supra* note 18, at 1331; CROSS, *supra* note 19, at 160; SUNSTEIN ET AL., *supra* note 10, at 69; John P. McIver, *Scaling Judicial Decisions: The Panel Decision-Making Process of the U.S. Courts of Appeals*, 20 AM. J. OF POL. SCI. 749, 757 (1976).

³⁴ Farhang and Wawro, *supra* note 7, at 306. For a thoughtful recent discussion of dissent in multi-membered 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 See 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 e-mail from Marin Levy to Stephen Burbank (June 9, 2019). As Professor Levy acknowledges, this is “an imperfect measure of workload,” because “it 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, *Judging Under the Constitution: Dicta About Dicta*, 81 N.Y.U. L. REV. 1242, 1262 (2006).

³⁷ See Sean Farhang, Jonathan P. Kastellec, and 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. 559, 562 (2015); Steven A. Peterson, *Dissent in American Courts*, 43 J. OF POL. 412, 415–16 (1981).

circuit law.³⁸ Hence, the absence of dissents does not arise from panel consensus, but rather judges who disagree lack 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 forego 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

³⁸ See SUNSTEIN ET AL., *supra* note 10, at 65–66; Donald R. Songer, *Factors Affecting Rates of Dissent in the U.S. Courts of Appeals*, in JUDICIAL CONFLICT AND CONSENSUS: BEHAVIORAL STUDIES OF AMERICAN APPELLATE COURTS 117 (Sheldon Goldman and Charles M. Lamb eds., 1986); Atkins and Green, *supra* note 32.

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 10, at 65–66.

⁴⁰ See HETTINGER ET AL., *supra* note 32, at 19; Farhang and Wawro, *supra* note 7, 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 10, at 64–71; *see* Farhang and Wawro, *supra* note 7, at 307; Donald R. Songer, *Consensual and Nonconsensual Decisions in Unanimous Opinions of the United States Court of Appeals*, 26 AM. J. OF POL. SCI. 225, 227 (1982).

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

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

To the extent that any or all of the suppressed dissent hypotheses are operative, institutional conditions on the Court 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 dissenting views by minority group judges.⁴⁵

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 the strongest 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 occur 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

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 comprising 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.

⁴⁶ Farhang and Wawro, *supra* note 7, at 308.

⁴⁷ See Lewis A. Kornhauser and Lawrence Sager, *The One and the Many: Adjudication in Collegial Courts*, 81 CAL. L. REV. 1 (1993); Edwards, *supra* note 40; SUNSTEIN ET AL., *supra* note 10.

will likely have a larger “argument pool” than a more homogeneous one, meaning that wider ranges 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 vote 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 be absent.⁴⁹

In the context of case studies, researchers have found evidence of judges changing their initial position in cases after being exposed to arguments and information from a fellow judge in the course of the deliberative process.⁵⁰ As Carp and Stidham put it, judges “can be swayed by an articulate and well-reasoned argument from a colleague with a differing opinion.”⁵¹ 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).⁵²

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. 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). 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 racial minorities may bring a distinctive perspective to bear in the deliberative process and persuade male or white judges to decide differently than they would on all-male or all-white panels.⁵³

⁴⁸ SUNSTEIN ET AL., *supra* note 10, at 76.

⁴⁹ *Id.* at 71–73.

⁵⁰ See J. Woodford Howard Jr., *On the Fluidity of Judicial Choice*, in AMERICAN COURT SYSTEMS: READINGS IN JUDICIAL PROCESS AND BEHAVIOR (Sheldon Goldman and Austin Sarat eds., 1978).

⁵¹ ROBERT A. CARP AND RONALD STIDHAM, THE FEDERAL COURTS, 2ND ED. 176 (1991).

⁵² CROSS, *supra* note 19, at 154–55; see also Edwards, *supra* note 40, at 1656–61; SUNSTEIN ET AL., *supra* note 10, at 73.

⁵³ See Farhang and Wawro, *supra* note 7, at 308; Kstellec, *supra* note 7, at 171.

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

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 who they perceive as more credible and expert, rather than following them with abject deference.⁵⁹ Thus, if the deliberative account is operative, and if white and male judges

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

⁵⁵ Peresie, *supra* note 7, 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*, 409–10 (Joseph Berger and Morris Zelditch, Jr. eds., 1985); Barbara Meeker and Patricia A. Weitzel-O’Neill, *Sex Roles and Interpersonal Behavior in Task-Oriented Groups*, in *STATUS, REWARDS, AND INFLUENCE: HOW EXPECTATIONS ORGANIZE BEHAVIOR*, 390–91 (Joseph Berger and Morris Zelditch, Jr. eds., 1985).

⁵⁷ See Peresie, *supra* note 7, at 1783–84; Boyd, Epstein, and Martin, *supra* note 3, at 392.

⁵⁸ See Kastlelec, *supra* note 7, at 171–72 (observing that the mere presence of an African-American judge in an affirmative action case, independent of the content of deliberations, and independent of her vote, may influence the behavior of white judges on the panel). Boyd, Epstein, and Martin, *supra* note 3, at 392 n.8, suggest the same possibility with respect to gender, and they liken this to cue taking.

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

view their racial minority and female panel colleagues 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, and who are concerned about compliance.⁶²

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 and 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 motivated by the institutional costs of dissents, or by fear of reversal, "[s]ince judges often desire

⁶⁰ See LEE EPSTEIN AND JACK KNIGHT, *THE CHOICES JUSTICES MAKE* (1995); FORREST MALTZMAN, JAMES F. SPRIGGS, AND PAUL J. WAHLBECK, *CRAFTING LAW ON THE SUPREME COURT: THE COLLEGIAL GAME* (2000); see also MURPHY, *supra* note 33.

⁶¹ See Ryan J. Owens and Ryan C. Black, *Strategic Bargaining on the United States Courts of Appeals*, presented at the annual meeting of the American Political Science Association, Toronto, Canada (2009).

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

⁶³ See Cross and Tiller, *supra* note 7.

⁶⁴ See Kastlelec, *supra* note 18; Kim, *supra* note 18.

unanimity or, at least, as large a majority as possible, the threat of dissent can be used to gain concessions from the majority.”⁶⁵

Under the bargaining explanation for panel effects, judges whose preferences are in the panel majority make concessions to the panel minority to achieve unanimity, but their view of the best or correct outcome is not actually influenced by them. Panel effects are not explained by the panel minority’s persuasion or their enlargement of the “argument pool.” Instead, unpersuaded judges in the panel majority make strategic concessions with the goal of keeping the panel unanimous.

Finally, the “judicial logrolling” explanation holds that on multi-judge courts there may be norms of reciprocity whereby unanimity is fostered by rotation of opinion writing, together with deference to opinion authors in crafting opinions.⁶⁶ Judges join opinions with which they disagree based upon the expectation that they will enjoy similar deference when in the authorship role. This explanation for unanimity would not allow non-authoring minority group judges who withhold a dissent when sitting with two majority group judges to affect the decision. It would, however, allow them to influence the content of other decisions when they are the writer, even when sitting with two majority group judges with divergent preferences in the case. With that qualification, we group logrolling across cases with the modified content explanations because, if operative, it would allow lone minority group judges to influence the application and development of law in areas in which majority and minority views differ systematically.

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, bargaining, or deference to opinion authors. 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.⁶⁷ A single African-American sitting with two white judges, and a single woman sitting

⁶⁵ Peterson, *supra* note 37, at 418.

⁶⁶ See SUNSTEIN ET AL., *supra* note 10, at 65–66; Farhang and Wawro, *supra* note 7, at 309; Peterson, *supra* note 37, at 417.

⁶⁷ See Kastlelec, *supra* note 7, at 172 (“some suggestive evidence that votes alone do not seem to be the main mechanism underlying the effects I uncover”); Kastlelec, *supra* note 18 (2011) (results support both internal and external mechanisms). See also Shahshahani & Liu, *supra* note 12, at 739 (“[O]ur finding suggests that panel effects (where they do exist) cannot

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 materially influence the votes of the panel majority.

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 endeavored to identify every published (precedential) federal Court of Appeals panel decision addressing whether or not a class should be certified under the modern Rule 23, which became effective in 1966. We identified 1,148 such cases from 1967 (when the first published case appeared) to the end of 2017.⁶⁸ Of course, published Court of Appeals decisions differ from unpublished (nonprecedential) decisions in important respects, and published decisions are not representative of all litigated cases.⁶⁹ Researchers should study types of cases best suited to answer their particular research questions, and published decisions are not an appropriate basis to answer many important questions.⁷⁰

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’.”)

⁶⁸ We began by identifying every case in which Westlaw assigned any class action headnote in a case (there are 33 such headnotes) from 1966 through 2017. This yielded 2,191 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, a battery of variables were coded.

⁶⁹ See 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 and James J. Brudney, *Stalking Secret Law: What Predicts Publication in the United States Courts of Appeals*, 54 VAND. L. REV. 71 (2001); Theodore Eisenberg and Stewart J. Schwab, *What Shapes Perceptions of the Federal Court System?*, 56 U. CHI. L. REV. 501 (1989).

⁷⁰ See Kim, *supra* note 18, at 1351-52; Farhang, Kastlelec and Wawro, *supra* note 37, at 570. *But see* Peresie, *supra* note 7, at 1780 (including both published and unpublished decisions even though author seems to have understood that, at least in some circuits, the two types of decisions are made through different processes). There are certainly important questions that can be studied with unpublished appellate decisions, such as what factors determine what cases are published. However, a great many of them are not in electronic databases before the early to mid-2000s, and thus complete or representative data are very difficult to obtain. See Andrew T. Solomon, *Making Unpublished Opinions Precedential: A Recipe for Ethical Problems & Legal Malpractice?*, 26 MISS. C. L. REV. 185, 188-89 (2007).

Our interest in the larger study is lawmaking on class certification. Our interest here is the influence of ideological and identity characteristics of judges, if any, on the creation and development of that 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. Unpublished decisions have no precedential weight. Because published decisions may differ from unpublished decisions in important ways, our results cannot be generalized beyond the landscape we study: the creation and application of law governing class certification via precedential Court of Appeals decisions.

Our dependent variable is whether a decision is pro or anti-certification. In order to code it, the certification analysis in each decision was read in full. We code a decision as pro-certification (=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 remands for further proceedings on certification. We code a case as anti-certification (=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.⁷¹

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.⁷² 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 anti-certification 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 probably the most extreme form of influence, and thus to the extent that we find that a judge or panel

⁷¹ In 29 of our 1,148 cases, the outcome was mixed in such a way that we could not characterize it as either pro- or anti-certification, and thus these cases were excluded. There were an additional 11 cases in which we were unable to characterize the trial court's decision on the certification issue that was before the Court of Appeals as either pro- or anti-certification. These cases were excluded as well because the direction of the trial court decision is a critical control in our models.

⁷² See EPSTEIN AND KNIGHT, *supra* note 60.

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,⁷³ gender, and race of each judge using the Federal Judicial Center Biographical database.⁷⁴ With respect to race, our models focus on whether African American judges have different voting behavior than white 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 American judges as a discrete category.⁷⁵ We also examined alternative specifications of all models presented in this article (not displayed) pooling all non-white judges into a single racial minority category, and comparing them to white judges. In those models, we found no statistically significant differences at either the individual or the panel level.⁷⁶ The race differences we report are distinctive to African American judges.

We incorporate an extensive battery of control variables that include a variety of case characteristics, control for circuit level variation with circuit fixed effects, and control for covariates that change over time with year fixed effects. The control variables are detailed in Part I of the Appendix. 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.⁷⁷

⁷³ Again, we use party of the appointing president as a proxy for party, and party itself as a proxy for presumed ideological preferences.

⁷⁴ <https://www.fjc.gov/search/site/biographical%20database>

⁷⁵ See Cox and Miles, *supra* note 7; Kastellec, *supra* note 7; HAIRE AND MOYER, *supra* note 2, 28-32; Jonathan P. Kastellec, *Race, Context and Judging on the Courts of Appeals: Race-Based Panel Effects in Death Penalty Cases* (July 26, 2016), available at SSRN: <https://ssrn.com/abstract=2594946> or <http://dx.doi.org/10.2139/ssrn.2594946>

⁷⁶ We also find that Hispanic judges' votes, and the presence of a Hispanic judge on a panel, are not associated with higher probabilities of pro-certification votes and outcomes. We have an insufficient number of panels (12 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 judges to evaluate them separately.

⁷⁷ 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'

Table 1 shows the distribution of policy areas of the causes of action underlying the certification decisions in our data for all policy areas that exceed two percent of the data. The leading areas are anti-discrimination, consumer, securities, labor and employment, antitrust, and prisoner cases.

Table 1: Policy Areas of Causes of Action Underlying Certification Decisions

Anti-discrimination (race, gender, age, disability, etc.)	26%
Consumer	14%
Civil rights other than anti-discrim (prisoner is largest subgroup)	13%
Securities	10%
Labor	10%
Antitrust	6%
Public benefits	5%
Product liability	3%
Environmental and toxic substances	2%
Insurance	2%
Other	9%

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; 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 2 provides the percentage of pro-certification votes by party, gender, and race. At a simple descriptive level, judges appointed by Republican presidents (Republicans) voted for certification 37% of the time, and judges appointed by Democratic presidents (Democrats) did so 50% of the time. Democrats' rate was 13-percentage points higher and 35% larger than Republicans' rate. Differences along gender and racial lines were smaller. Males and

scheduling needs. See Marin Levy and Adam Chilton, *Challenging the Randomness of Panel Assignment in the Federal Appellate Courts*, 101 CORNELL L. REV. 1 (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, and Benjamin E. Lauderdale, *Random Assignment to Death*, 4 (1/20/19) (on file with authors).

white/others voted for certification at a rate of 42%, and women and African Americans did so at rates of 48 and 50%, respectively. The dissent rate in the data is quite low, at only 2 percent. At the individual vote level, 43 percent of the 3,343 votes in the data were in the pro-certification direction.

Table 2: Percent Certified: Individual-Level Correlations

<u>Types</u>	<u>% Cert</u>	<u># Votes</u>
All Cases	43%	3343
Republicans	37%	1828
Democrats	50%	1515
Males	42%	2920
Females	48%	423
White/Other	42%	3153
African American	50%	190

One simple way to characterize the data from a panel perspective is to examine the percentage of certification outcomes (not votes) on panels that have zero, one, two, and three panel members with the characteristic in question. Table 3 displays this information, except that we have only two panels out of 1,148 cases with three women, and no panels with three African Americans, and thus we do not have meaningful information on those types of panels. At the panel level, the relationships are more pronounced than at the individual level. The percentage of pro-certification outcomes grows from 29% on all-Republican panels (RRR), to 40% on an RRD panel, to 50% on an RDD panel, to 54% on a DDD panel. Thus, moving from an all-Republican to an all-Democratic panel, there is growth of 25 percentage points in the rate of certification, and this represents an increase of 86% in the certification level relative to all-Republican panels.

With respect to gender, the presence of one woman has a small positive association with certification (4-percentage points), but the addition of a second woman, yielding a panel majority, produces a more substantial jump (an additional 13-percentage points). Moving from an all-male panel to one with two women is associated with a 17-percentage point increase in certification, or a 41% growth in the certification level. The presence of one African American is associated with growth in the certification rate by 5-percentage points, and the addition of a second African American (yielding a panel majority of African Americans) by another 8, for a total of 13-percentage points. However, with only 11 African American-majority panels, we lack sufficient data to reach a confident conclusion.

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 in

published cases is that of Sunstein et al.,⁷⁸ which evaluated voting patterns across the 23 policy areas that are listed in Table 4.⁷⁹ In selecting these 23 policy areas for study, Sunstein et al. specifically endeavored to study the “most controversial issues of the day,”⁸⁰ not a random sample of the work of the Court of Appeals.

Table 3: Percent Certified: Panel-Level Correlations

<u>Types</u>	<u>% Cert</u>	<u># Cases</u>
All Cases	43%	1111
Party		
All Republican	29%	214
2 Reps, 1 Dem	40%	397
1 Rep, 2 Dems	50%	388
All Democrat	54%	112
Gender		
All Male	41%	753
2 Males, 1 Female	45%	294
1 Male, 2 Females	58%	62
All Female	Insufficient data (2 cases)	
Race		
All White/Other	42%	933
2 Whites, 1 African Am	47%	167
1 White, 2 African Am	55%	11
All African American	No cases	

⁷⁸ See SUNSTEIN ET AL., *supra* note 10.

⁷⁹ 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 ones (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 percent of unified panels are unanimous.

⁸⁰ SUNSTEIN ET AL., *supra* note 10, at 8.

Table 4: Sunstein et al. Data on Differences Between Percent of Liberal Votes and Outcomes by Democratic Versus Republican Appointees

	D%-R%*	DDD%-RRR%**
	<u>Individual-level</u>	<u>Panel-level</u>
Gay and Lesbian Rights	40	86
National Environmental Policy Act	24	51
NLRB	20	50
Affirmative Action	28	49
Sex Discrimination	17	46
11th Amendment Abrogation	21	43
Piercing the Corporate Veil	13	39
ADA	16	33
EPA	10	33
Contract Clause	7	33
Campaign Finance	17	31
Obscenity	9	25
Federal Communications Commission	8	25
<i>Class Actions</i>	<i>13</i>	<i>25</i>
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 Republicans appointees

**The % of liberal outcomes in the policy area by all-Democratic panels, minus the % by all-Republican panels

Using these data as a benchmark for Court of Appeals lawmaking in especially controversial areas, class certification is squarely in the middle of the pack in terms of ideological voting and outcomes. The 13-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, which is 10-percentage points. The 25-percentage point difference in votes on all-Democratic versus all-Republican panels in class certification cases is exactly at the median for the policy areas listed in Table 4. 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, outcomes in capital punishment, employment discrimination, desegregation, and abortion cases.⁸¹

B. Statistical Models

1. Individual-Level Model of Judge Votes

Of course, bivariate descriptive statistics can be misleading, and a statistical model is required to get a stronger handle on the data. Table 1-A (in Part I of the Appendix), presents a logistic regression model with votes on certification as the dependent variable and the set of independent variables described in Part I of the Appendix, and standard errors clustered on case. We discuss alternative models in Part I of the Appendix with clustering on both case and judge. We focus only on the independent variables that motivated this paper: party (as a proxy for ideology), gender, and race. Party is significant and positive with a magnitude similar to the simple percentage differences. The logit coefficient on party is associated with an increase of 11 percentage points in the probability of a vote for certification. Gender and race are both insignificant. Viewed at the individual judge level, gender and race appear to be unrelated to judges' votes on certification.

We considered the possibility of interaction effects among party, gender, and race, which entails comparing subsets of each of these three variables. The following questions about subsets of the data can be examined with interaction terms:

- Are Democratic women more/less pro-certification than Democratic men?
- Are Republican women more/less pro-certification than Republican men?
- Are Democratic African Americans more/less pro-certification than Democratic white/others?
- Are Republican African Americans more/less pro-certification than Republican white/others.
- Are judges with the intersectional identity of African American women (or men) more/less pro-certification than is captured by the direct effects of the race and gender variables?

⁸¹ We show below in statistical models that the actual difference between all-Democratic and all-Republican panels is 37 percentage points when one conditions on necessary controls. We limit our comparison to descriptive statistics because Sunstein et al. do not use statistical models.

We ran the same model reported in Table 1-A, but additionally including the full set of interactions of party, gender and race. All interactions were insignificant, answering each of the five questions above in the negative.

2. Panel-Level Model of Judge Votes

The data are much more interesting at the panel level. Our statistical model for 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 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 “REF” parenthetical. Thus, for example, a Republican voting on an all-Republican panel is the excluded reference category, and all of the remaining party variables are interpreted with respect to that category. That is, the model tells us whether each of the remaining party-panel combinations listed in Table 5 is statistically significantly different from a Republican voting on an all-Republican panel.

a. Party

The logistic regression model reported in Table 2-A, Model A (in Part I of the Appendix), replicates the model presented in Table 1-A, but now the panel variables discussed in the last paragraph have been substituted for the individual-level party, gender, and race variables. All five of the judge party-panel combination variables are statistically significant and positive, indicating that every judge party-panel combination is more likely to vote for certification than a Republican sitting with two other Republicans (the reference category). Using these model results, we computed predicted probabilities of votes to certify for each of the judge party-panel combinations, and they are displayed in Table 6. The switch from a Republican voting on an all-Republican panel to a Democrat voting on an all-Democratic panel is dramatic. The former has a 27% predicted probability of voting in favor of certification, and the latter a 62% predicted probability. The luck of the panel draw with respect to ideology can more than double the chances of a pro-certification outcome in a precedential decision.

Mixed panels have levels of pro-certification voting between these two poles. Judges on Democrat-majority panels are more likely to vote in favor of certification than judges on Republican-majority panels. We observe one signature feature of panel effects here. Republicans on Democrat-majority panels are more likely to vote for certification than Democrats on Republican-majority panels. The norm of unanimity is strongly present. Panel characteristics are more powerful than individual characteristics in explaining voting.

We also observe an asymmetry in panel effects. As compared to a Republican voting on an RRR panel, the probability of a pro-certification vote for a Republican on an RRD panel nearly doubles, growing from 27 to 49%. Relative to all-Republican panels, the votes of Republican judges on certification are powerfully affected by the presence of a single Democrat.

Table 5: Panel Variables for Party, Gender, and Race

<u>Variable Description</u>	<u>Variable Name</u>
<u>Republican Majority Panels</u>	
Republican voting, with 2 other Republicans (REF)	All Reps
Republican voting, with 1 Republican & 1 Democrat	Rep voting with 1R & 1D
Democrat voting, with 2 Republicans	Dem voting with 2Rs
<u>Democratic Majority Panels</u>	
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	All Dems
<u>Male Majority Panels</u>	
Male voting, with 2 other Males (REF)	All Male
Male voting, with 1 Male & 1 Female	Male voting with 1M & 1F
Female voting, with 2 Males	Fem voting with 2Ms
<u>Female Majority Panels</u>	
Male voting, with 2 Females	Male voting with 2Fs
Female voting, with 1 Female & 1 Male	Fem voting with 1F & 1M
Female voting, with 2 other Females	All Female
<u>White/Other Majority Panels</u>	
White/Other voting, with 2 other White/Others (REF)	All WO
White/Other voting, with 1 White/Other & 1 African Am	White/Other voting with 1WO & 1AA
African Am voting, with 2 White/Others	African Am voting with 2WOs
<u>African American Majority Panels</u>	
White/Other voting, with 2 African Ams	White voting with 2AAs
African Am voting, with 1 African Am & 1 White/Other	African Am voting with 1AA & 1WO
African Am voting, with 2 other African Ams	All African Am

**Table 6: Predicted Probabilities of Votes for Certification
for Party, Gender, and Race-Panel Combinations**

Republican-Majority Panels

Republican voting, with 2 Reps	27%
Republican voting, with 1 Rep & 1 Dem	49%
Democrat voting, with 2 Reps	54%

Democrat-Majority Panels

Republican voting, with 2 Dems	56%
Democrat voting, with 1 Dem & 1 Rep	59%
Democrat voting, with 2 Dems	62%

Male-Majority Panels

Male voting, with 2 Males (all-Male)	38%
Male voting, with 1 Male & 1 Female	insig different from all-Male
Female voting, with 2 Males	insig different from all-Male

Female-Majority Panels

Male voting, with 2 Females	59%
Female voting, with 1 Female & 1 Male	58%
Female voting, with 2 Females	insufficient data to estimate

White/Other-Majority Panels

White/Other voting, with 2 WOs (all-WO)	42%
White/Other voting, with 1 WO & 1 AA	50%
African Am voting, with 2 WOs	51%

African-American Majority Panels

White/Other voting, with 2 African Ams	insig different from all-White/Other
African Am voting, with 1 AA & 1 WO	insig different from all-White/Other
African Am voting, with 2 AA	no cases

Conversely, as compared to a Democrat on a DDD panel, the probability of a pro-certification vote for a Democrat on a DDR panel declines only modestly, from 62 to 59%. Relative to all-Democrat panels, the votes of Democratic judges on certification are not materially affected by the presence of a single Republican. In fact, although the difference between a Republican vote on an RRR panel and an RRD panel is large and statistically significant, the difference between a Democratic vote on a DDD panel and a DDR panel is clearly statistically insignificant.⁸²

b. Gender

For the gender-panel variables, all male panels are the reference category.⁸³ Controlling for party, race, and the numerous variables listed in Part I of the Appendix, the variable capturing the votes of male judges serving on a panel with one female (*Male voting with 1M & 1F*) is insignificant, indicating that they are no more likely to vote for certification than when serving on an all-male panel. Likewise, the variable capturing a female sitting with two males (*Fem voting with 2Ms*) is insignificant, indicating that they are no more likely to vote for certification than a male serving on an all-male panel. These two variables capture the same panels (with two males and one female) and separately measure votes of male and female panel members, showing that neither is statistically distinguishable from the votes of males on all-male panels.

In sharp contrast, when there are two females on a panel, the variable measuring the vote of the male serving with them (*Male voting with 2Fs*) is statistically significant, positive, and

⁸² In order to arrive at this conclusion, we reran Model A in Table 2-A, but this time we held out as the reference category the votes of Democratic judges on all-Democrat panels. Neither the coefficient for a Democrat voting on a DDR panel, nor that for a Republican voting on a DDR panel, was statistically distinguishable from a Democrat voting on a DDD panel (the p values were .85 and .16, respectively). In order to examine this dynamic further, we ran the identical model, but with dissent as the dependent variable rather than certification vote. We found that as compared to a Democrat on a DDD panel, a Democrat on a DRR panel is not significantly more likely to dissent. However, as compared to a Republican on an RRR panel, a Republican on an RDD panel is more likely to dissent, with a predicted probability of dissent growing from 2% in all panel configurations other than a Republican on an RDD panel, to 10% for a Republican on an RDD panel. Thus, the lack of Republican influence on Democrat-majority panels is associated with higher rates of panel conflict and Republican dissent. Ultimately, our data cannot reveal the reason for this asymmetry in panel effects and dissenting behavior. One possibility is that Republicans are more extreme in the anti-certification direction than Democrats are in the pro-certification direction. Consequently, the mitigating force of one Democrat relative to an all-Republican panel is greater, and Republicans are more likely to dissent when in the minority. Alternatively, Democrats may be more extreme in their pro-certification preferences, to the point that they are less amenable to persuasion by one Republican, leading to more Republican dissents when they are in the minority. We make no claims about partisan asymmetry beyond the class certification context.

⁸³ The two cases with three female judges were dropped from the model because they lacked any variation on the dependent variable, and thus a line for three-female panels does not appear in Tables A-2 or A-3.

large in magnitude, indicating that males on such panels are materially more likely to vote for certification as compared to when serving with two other males. The predicted probabilities derived from the model for gender-panel combinations that are statistically distinguishable from a male voting on an all-male panel are displayed in Table 6. A male judge's predicted probability of voting for certification grows from 38% on an all-male panel to 59% when serving with two women. This growth of 21 percentage points represents 55% growth in the rate of voting for certification relative to the votes of males on all-male panels. Likewise, the variable measuring the vote of a female serving on a panel with one other female (*Fem with 1F & 1M*) is statistically significantly larger than the votes of males on all-male panels. Under this panel composition, a woman has a 58% predicted probability of a pro-certification vote. Again, these two variables capture the same panels (with two females and one male) and separately measure the votes of male and female panel members, showing that both are materially more likely to vote to certify than a male on an all-male panel. On these panels male and female judges vote in a pro-certification direction at an almost identical rate, which is consistent with the high level of unanimity in the data.

Our interpretation of the higher rate of pro-certification voting by women when they form a panel majority is that it more accurately reflects female judges' sincere preferences. When women are in the minority, men 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.⁸⁴ 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.⁸⁵

This result stands in marked contrast to past work finding gender or race panel effects on the Courts of Appeals.⁸⁶ In each of these studies, where there was clear evidence of gender or

⁸⁴ Cf. Farhang & Wawro, *supra* note 7, at 310 ("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 hypothesis. 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.").

⁸⁵ 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 7, at 1783.

⁸⁶ See Farhang and Wawro, *supra* note 7; Peresie, *supra* note 7; Cox and Miles, *supra* note 7; Boyd, Epstein, and Martin, *supra* note 3; Kastle, *supra* note 7. 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 7, 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 and Wawro, *supra* note 7, at 320. See *id.* at 321 (no effect on outcome).

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. A different and more majoritarian dynamic is at work in our class-certification decisions.⁸⁷

This raises the following question: Are women in the panel minority, when not affecting the outcome votes of their male colleagues, more likely to dissent? Or are women in the panel minority joining the majority opinion nevertheless? We ran the model in Table 6, Model A, 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. As compared to a male serving on an all-male panel, 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.

A final question we consider is whether the result for panels with two women is being driven by panels with two women from a particular political party. The models contain controls for party, so the gender results are conditional on party composition. But it is nevertheless possible, for example, that two *Democratic* women in the majority are distinctively more pro-certification than Democratic men and this is driving the gender results. We examined models comparing the votes on panels with (1) a majority of female Democrats, and (2) other female majorities (Republican female majority, or bi-partisan female majority). Votes on the two types of panels are statistically indistinguishable. The association between pro-certification votes and

⁸⁷ HAIRE AND MOYER, *supra* note 2, 96-97, find that, when analyzing a large sample of cases pooled across many policy areas, the presence of two “nontraditional” judges (female or nonwhite) is associated with greater variance, or unpredictability, in white male judges’ votes. This heightened variance is not present when two white males sit with one nontraditional judge. Haire and Moyer earlier reported that women and nonwhite judges do not vote differently than male and white judges in data pooled across many policy areas. *Id.* at 31, 47. They suggest that the heightened white male voting variance when sitting with two nontraditional judges “lines up with” panel effects studies such as Boyd, Epstein, and Martin, *supra* note 3, and Kastellec, *supra* note 7, although it is not clear how. HAIRE AND MOYER, *supra* note 2, 98. Those panel effects studies found that the presence of *one* woman or African American changed the votes of males and whites in a pro-civil rights direction, whereas Haire and Moyer’s variance result is absent under that panel configuration. The panel effects studies also analyzed data in discrimination claims, whereas Haire and Moyer’s variance result is in data pooled across many policy areas, a context in which no study has found race or gender-based panel effects. 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.

female majority panels is not distinctively driven by Democratic (or Republican) female majorities.⁸⁸

c. Race

Controlling for party, gender, and the numerous variables listed in Part I the Appendix, the race panel variables show quite different patterns as compared to the gender panel variables. 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, indicating that they are more likely to vote for certification 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 (*African Am voting with 2WOs*) is significant, indicating that they are also more likely to vote for certification 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 derived from the model for race-panel combinations that are statistically distinguishable from a white/other judge voting on an all-white/other panel are displayed in Table 6. A white/other judge's predicted probability of voting for certification grows from 42% on an all-white/other panel to 50% when serving with one African-American, which is about the same as the probability of a pro-certification vote for African American judges on these panels (51%).

In contrast, when there are two African American judges on a panel, the variable measuring the votes of the African American judges (*African Am voting with 1AA & 1WO*) and the variable measuring the votes of the white/other judge (*White/Other voting with 2AAs*) are both insignificant or statistically indistinguishable from the votes of white/other judges on all-white/other panels. However, there are only 11 such cases in the data, 55% of which were decided in the pro-certification direction. We simply don't have enough data to provide meaningful estimates of voting under this panel configuration. As noted earlier, there are no race panel effects if we pool all non-white judges into a single racial minority category. The race panel effects emerge only with respect to African American judges.

Finally, we consider two questions about subsets of the judge race variables. The first is whether our results for one African American on a panel are driven by cases with African Americans from a particular political party. The models control for party composition of panels,

⁸⁸ See Appendix, Part II. There were too few female Republican majority panels (10) for meaningful analysis of them as a discrete category. In an alternative specification, we split the one female panels into one Democratic female and one Republican female, to assess the possibility that the insignificance of one female on the panel is masking a significant association for one woman from a particular party, and we found that votes on panels of one Democratic female versus one Republican female are statistically indistinguishable, and that when included in the model as separate variables one Democratic female and one Republican female are both insignificant. *Id.*

and thus the race results are conditional on party composition. But it is still possible that, even controlling for party, for example, *Democratic* African Americans are distinctively more pro-certification than Democratic white/others and this is driving the race results. We examined models comparing votes on panels with (1) one African American Democrat, and (2) one African American Republican. Controlling for other factors, votes on the two types of panels are statistically indistinguishable. The association between pro-certification votes and panels with one African American is not distinctively driven by African Americans appointed by one party.⁸⁹

The second is whether judges having the intersectional identity of African American women (or men) are more (or less) pro-certification than is captured by the separate direct effects of the race and gender variables. We examined models comparing votes on panels with (1) one African American male, and (2) one African American female. Controlling for other factors, votes on the two types of panels are statistically indistinguishable.⁹⁰

d. Majority “Nontraditional” Judge Panels

Haire and Moyer characterize both female and racial minority judges as “nontraditional” and examine some hypotheses that panels with a majority of nontraditional judges will yield distinctive outputs (although they do not examine case outcomes).⁹¹ Following this idea, we considered whether panels with (1) one African American *male* and (2) one white/other female have an elevated probability of pro-certification votes, analogous to majority female panels.⁹²

⁸⁹ See Appendix, Part II. When we say that the association is not driven by African American judges 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 percent 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 did for gender) because there are only 11 such panels.

⁹⁰ See Appendix, Part II.

⁹¹ Haire and Moyer find that panels with a majority of nontraditional judges yield opinions with one additional Westlaw headnote (increasing from about 10 to 11), which they characterize as “more thorough in their coverage of issues,” and less predictable voting by white males, as compared to all-white male panels and panels with one nontraditional judge. See HAIRE AND MOYER, *supra* note 2, 92-97.

⁹² We examine this particular configuration of nontraditional judge types (African American males and women) because we seek to assess whether the nontraditional majority status is consequential even when each type, individually, is in the panel minority. With an African American woman on the panel, the addition of a second nontraditional judge would create a majority of either women or African Americans. In addition, we cannot compare panels with one African American female and two white/other males, to panels with one African American female, one white/other male, and one white/other female, because we have an

We know that one African American on a panel is associated with elevated levels of pro-certification voting relative to all white/other panels, and we confirmed that this relationship holds true, at the same magnitude, when we examine panels with one African American *male*. The question is whether, as compared to a panel of one African American male and two white/other males, panels of one African American male, one white/other male, and one white/other female, are yet more prone to pro-certification voting. We find that they are not.⁹³ Although women, when in the majority, reveal a materially higher propensity to certify than men, and African American males do so when in the minority, a panel with one woman and one African American male is not more likely to yield pro-certification votes or outcomes than a panel with one African American male and no women.

3. Outcome Models

Thus far we have been examining models of individual judge votes in order to view the dynamics among panel characteristics and those votes. Given high rates of unanimity, it is intuitive to expect that panel characteristics associated with pro or anti-certification votes will also be associated with the direction of certification outcomes. It is, of course, the relationship between judge and panel characteristics and *outcomes* (rather than votes) that most concerns scholars and observers of the Courts of Appeals. Outcomes, not individual votes, make law. Given that we have three times more votes than case outcomes, we cannot assume that at the outcome level we will discern statistically significant relationships that mirror what we have observed at the vote level. A test of outcomes requires its own statistical model.

In our outcome model, the unit of analysis is the case, and pro versus anti-certification outcomes are coded exactly as pro versus anti-certification votes. At the case level, we measure panel effects with variables 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. All-Republican panels, all-male panels, and all-white/other panels are the reference categories for the party, gender, and race dummy variables. All of the same control variables are included. The results are reported in Table A-3, Model A (in Part I of the Appendix).

a. Party

Panels with one, two, and three Democrats are all statistically significantly more likely to vote in a pro-certification direction than all-Republican panels. Table 7 displays predicted probabilities, derived from the model, of pro-certification outcomes for each of the four partisan (ideological) panel combinations. They look very similar to voting probabilities, and party has a remarkably large association with outcomes. All-Republican panels have a 26% estimated

insufficient number of such cases. For the same reason, we cannot compare panels with two females and one white/other male, to panels with two females and one African American male.

⁹³ To test this, in the vote-level model with controls, we compared the probability of pro-certification votes across these two panel types, and the difference was clearly statistically insignificant. The same was true when comparing these two panel types at the case outcome (rather than the vote) level.

probability of a pro-certification outcome. The probability grows to 49% for RRD panels, to 56% for RDD panels, to 62% for all-Democrat panels.

Table 7: Predicted Probabilities of Pro-Certification Outcomes for Party, Gender, and Race-Panel Combinations

<u>Republican-Majority Panels</u>	
3 Republicans	26%
2 Republicans, 1 Democrat	49%
<u>Democrat-Majority Panels</u>	
2 Democrats, 1 Republican	56%
3 Democrats	62%
<u>Male-Majority Panels</u>	
3 Males	38%
2 Males, 1 Female	insig. different from 3 Males
<u>Female-Majority Panels</u>	
2 Females, 1 Male	57%
3 Females	insufficient data to estimate
<u>White/Other-Majority Panels</u>	
3 White/Others	41%
2 White/Others, 1 African Am	49%
<u>African American-Majority Panels</u>	
2 African Ams, 1 White/Other	insig. different from 3 White/Other
3 African Americans	insufficient data to estimate

We again observe asymmetric panel effects on party. As compared to an all-Republican panel, there is a 23-percentage point increase in the probability of certification by substituting one Democrat. As compared to an all-Democratic panel, there is a 6-percentage point reduction in the probability of a pro-certification outcome by substituting one Republican. Moreover, although the large difference between all-Republican panels and those with one Democrat is statistically significant, the small difference between all-Democratic panels and those with one

Republican is not.⁹⁴ One Democrat has a large effect on certification outcomes on Republican majority panels, and one Republican has no statistically discernable effect on Democrat majority panels.

b. Gender

Controlling for party, race, and the numerous variables listed in Part I of the Appendix, the gender panel effects in the outcome model are also consistent with the panel effects model of judge votes. Panels with one woman do not have a statistically distinguishable probability of a pro-certification outcome when compared to all-male panels. In contrast, panels with two women do, and the difference is large. All-male panels have a 38% estimated probability of pro-certification outcome, and panels with two women have a 57% probability. Relative to an all-male panel, drawing one with two women is associated with a 50% increase in plaintiffs' probability of a pro-certification outcome in a precedential case.

Thirteen percent of the judge votes in the data are cast by women, and there is at least one woman on 32 percent of the three-judge panels, but women are in the majority in only 6 percent of the panels. As distinguished from the earlier studies finding gender panel effects, where women in the minority influenced the votes of men in the majority, the majoritarian character of gender panel dynamics in certification decisions yields circuit lawmaking that significantly underrepresents women judges' preferences relative to their numbers on the federal bench.

c. Race

Controlling for party, gender, and the numerous variables listed in Part I of the Appendix, the race panel effects in the outcome model are also consistent with the panel effects model of judge votes. Panels with one African American have a statistically significantly higher probability of a pro-certification outcome than all-white/other panels. As reported in Table 7, all white/other panels have a predicted probability of 41% of a pro-certification outcome, and for panels with one African American the probability is 49%, for a growth in probability of 20%. In contrast, panels with two African American judges are not statistically distinguishable from all white/other panels. However, as noted above, with only 11 such panels we do not regard this estimate as meaningful.

4. Discrimination 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 Courts of Appeals judges' voting along gender and racial lines have

⁹⁴ In order to arrive at this conclusion, we reran Model A in Table 3-A, but this time we held out as the reference category panels with three Democratic judges. The coefficient for a DDR panel is clearly insignificant ($p=.83$). As compared to an all-Democratic panel, a DDR panel does not have a statistically distinguishable probability of a pro-certification outcome. As we noted earlier, our data do not allow us to determine the most plausible explanation for this asymmetry. See *supra* text accompanying note 82.

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 found gender to be associated with differences in voting in only one (gender-based employment discrimination), and they found no differences in a number of areas with high gender salience (abortion, sexual harassment, and affirmative action).⁹⁶ Haire and Moyer find that, in a large sample of cases spanning many policy areas that have a liberal/conservative dimension, African American judges do not vote more liberally than white judges 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 and judging. That is, past work has shown that women and African-American Court of Appeals judges are more likely to favor plaintiffs making at least some types of discrimination claims, and from there it is a short step to favoring discrimination plaintiffs seeking class certification. When all types of discrimination claims are combined, they comprise 26 percent of the data, so that their influence on the results could be quite large. We dropped those cases and ran the panel-level vote model and the outcome model on the remaining data.

The results are presented in Model B in Table 2-A, and Model B in Table 3-A (in Part I of the Appendix). The vote-level and outcome panel effects that we have reported in the full data with respect to both gender and race remain significant and of comparable magnitude when we drop discrimination claims. The differences in predicted probabilities between all-male panels and panels with two women, and between all white/other panels and panels with one African American, are actually slightly *larger* in these models without discrimination claims.⁹⁸ We can thus conclude with confidence that the results are not driven by discrimination claims. When discrimination claims are excluded from the data, the policy areas comprising more than 5 percent of the underlying claims are consumer (19%), securities (14%), labor and employment (14%), antitrust (8%), prisoner (8%), and public benefits (6%). Even outside the domain of anti-discrimination law, female majority panels, and panels with one African American, have a higher

⁹⁵ See Farhang and Wawro, *supra* note 7; Peresie, *supra* note 7; Boyd, Epstein, and Martin, *supra* note 3; HAIRE AND MOYER, *supra* note 2.

⁹⁶ See Boyd, Epstein, and Martin, *supra* note 3, at 400–06.

⁹⁷ See HAIRE AND MOYER, *supra* note 2, 30-32 (compare Model 1 and Model 4 in Table 1).

⁹⁸ See Appendix, Part I, Table 4-A.

propensity to certify classes.⁹⁹ These results will strike many as surprising in light of past scholarship on diversity and judging.

C. Explaining Pro-certification Preferences and Gender Panel Effects

1. Pro-certification Preferences

It is unclear to us why female and African American judges have more pro-certification preferences. The explanation that connects most readily to existing literature is that these preferences are tied to findings showing that female and African American judges are more attentive to claims of discrimination and inequality. The fact that our gender and race results are robust to dropping such claims 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 trans-substantive 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. Strategically minded judges concerned with developing the device for use in the latter areas may thereby be motivated to render more pro-certification decisions in the former areas. If this is true, the trans-substantive 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 results are robust to dropping claims based on discrimination and inequality may also mean that female and African American judges 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 female and African American judges 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 female and African American judges 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 female judges do not have different preferences than male judges on the Courts of Appeals. The leading study that purports to show this is Boyd, Epstein, and Martin,¹⁰⁰ which finds that in 12 out of 13 policy areas, women did not vote differently. However, they acknowledge that in each area they studied their sample sizes were too small to evaluate panels with two women.¹⁰¹ In reporting their results, they appear to have assumed, without discussing, that differences between male and female judges' preferences would be

⁹⁹ In another alternative specification, we additionally dropped cases coded with the “other civil rights” policy classification, the largest subset of which is prisoner claims, and the results we have just described were again robust in the models of both votes and outcomes.

¹⁰⁰ See Boyd, Epstein, and Martin, *supra* note 3.

¹⁰¹ *Id.* at 392–93, nn.8 & 11.

evident in the individual-level vote models and in cases with one woman on the panel. They appear not to have considered 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 female majority panels. 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, that we had a sufficient number of panels with two women to detect that women's preferences are more pro-certification when in the majority. This limitation in existing scholarship on the influence of judge 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.¹⁰²

2. Gender Panel Effects

Our data do not allow us to identify the panel dynamics that explain why the presence of one female on a panel is not associated with higher rates of pro-certification voting—either by herself or her co-panelists—but the presence of two women is. Nevertheless, we identify some possible explanations. One is straightforward. The single female judge, on average, advocates a more pro-certification view, but this advocacy does not affect the outcome votes of the male majority. Once in the majority, women vote consistently with their preferences, and change both case outcomes and the votes of the single male co-panelist.

This would be analogous to what may be the most likely explanation for why the presence of one Republican on a panel is not, but the presence of two Republicans is, associated with lower rates of pro-certification voting than are found on all-Democratic panels. On this view, the lone Republican tries but fails to persuade the Democratic majority. There is one distinguishing feature, however, between the one-female and the one-Republican panels. The one Republican, failing to affect the votes of the Democratic majority, is more likely to dissent. The one female, failing to affect the votes of the male majority, is not. We have also reported that one African American judge affects the outcome votes of the white/other majority, although one female judge does not similarly affect the male majority.

¹⁰² See Cox and Miles, *supra* note 7 (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 7 (same with respect to voting in favor of affirmative action programs on the U.S. Courts of Appeals); Sisk et al., *supra* note 24 (same with respect to voting in favor of plaintiffs alleging religious discrimination on the U.S. Courts of Appeals); Songer, Davis, and Haire, *supra* note 26 (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.

The distinctive patterns in the gender variables drew us to literature on 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).¹⁰³ 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 “authoritative representation,” which is “any feature of communication among decision-makers that affects their authority,” or their “expectation of influence,” during the decision-making process.¹⁰⁴ 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, involving both elite and non-elite participants, and they have done so in controlled experiments and with data from lived experience.¹⁰⁵

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

¹⁰³ See, e.g., Tali Mendelberg, Christopher F. Karpowiz and J. Baxter Oliphant, *Gender Inequality in Deliberation: Unpacking the Black Box of Interaction*, 12 PERSPECTIVES ON POLITICS 18, 18 (2014) (hereinafter *Black Box*) (quoting scholars who argue that “‘critical mass theory is both problematic and under-theorized,’ its mechanism ‘unspecified’ and the power of small numbers of women ‘neglected’”); Tali Mendelberg and Christopher F. Karpowitz, *Power, Gender, and Group Discussion*, 37 ADVANCES IN POL. PSYCH. (Supp. 1) 23, 23 (2016) (hereinafter *Group Discussion*) (“And so the gender gap has a chameleon quality: now you see it, now you don’t. Moreover, the gap is often ‘modest,’ ‘negligible,’ or even ‘tiny’ in size.”).

¹⁰⁴ Mendelberg, Karpowitz and Oliphant, *Black Box*, *supra* note 103, 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.”); Christopher F. Karpowitz, Tali Mendelberg and Lauren Mattioli, *Why Women’s Numbers Elevate Women’s Influence, and When They do Not: Rules, Norms, and Authority in Political Discussion*, 3 POLITICS, GROUPS, AND IDENTITIES 149, 150, 158 (2015) (hereinafter *Women’s Numbers*).

¹⁰⁵ See CHRISTOPHER F. KARPOWITZ AND TALI MENDELBERG, *THE SILENT SEX: GENDER, DELIBERATION, AND INSTITUTIONS* (2014); Mendelberg, Karpowitz and Oliphant, *Black Box*, *supra* note 103; Karpowitz, Mendelberg and Mattioli, *Women’s Numbers*, *supra* note 104; Tali Mendelberg, Christopher F. Karpowitz and Lauren Mattioli, *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 *Women’s Influence*); Mendelberg and Karpowitz, *Group Discussion*, *supra* note 103; Tali Mendelberg and Christopher F. Karpowitz, *Women’s Authority in Political Decision-Making Groups*, 27 LEADERSHIP Q. 487 (2016) (hereinafter *Political Decision-Making Groups*); Pamela Ban, et al., *A Woman’s Voice in the House: Gender Composition and its Consequences in Committee Hearings* (Dec. 10, 2018) (hereinafter *A Woman’s Voice*), available at

share of influence when they are in the minority, a disadvantage that continues in some contexts until women constitute a majority (or even a super-majority).¹⁰⁶ 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 males on these dimensions when they move from majority to minority.¹⁰⁷ 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 compared to when they are in the majority,¹⁰⁸ an outcome the authors see as tied to women being treated as less authoritative, less deserving of respect, and less influential when in the minority.¹⁰⁹

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 precedential decision

¹⁰⁶ See Mendelberg, Karpowitz and Mattioli, *Women's Influence*, *supra* note 105, at 4-5, 7.

¹⁰⁷ See Mendelberg, Karpowitz and Oliphant, *Black Box*, *supra* note 103, 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.

¹⁰⁸ See Mendelberg and Karpowitz, *Political Decision-Making Groups*, *supra* note 105, 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 ones they privately preferred.”); Karpowitz, Mendelberg and Mattioli, *Women's Numbers*, *supra* note 104, at 168.

¹⁰⁹ See Mendelberg and Karpowitz, *Political Decision-Making Groups*, *supra* note 105, at 498-99.

making on the Courts of Appeals a theory previously tested in quite different contexts.¹¹⁰ 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 female advocates experience gender bias during oral arguments in the Supreme Court?¹¹¹ Yet, recent research shows that they do.¹¹²

This work on gender may shed light on why patterns of gender panel effects in our class action data differ from those found in earlier work on employment discrimination cases. In the latter area, the presence of one female *did* significantly influence the male majority, an effect that researchers thought may be explained by male judges taking “cues” from females who they perceived (based on gender) as more expert or informed.¹¹³ If this account of the mechanism is correct, female judges in employment discrimination cases may be perceived by male judges as

¹¹⁰ See Ban et al., *A Woman’s Voice*, *supra* note 105, at 6 (“we 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, Mendelberg and Mattioli, *Women’s Numbers*, *supra* note 104, 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.”).

¹¹¹ See Dana Patton and Joseph L. Smith, *Lawyer, Interrupted: Gender Bias in Oral Arguments at the U.S. Supreme Court*, *J. LAW & COURTS* 337 (Fall 2017) (finding that female lawyers are interrupted earlier, allowed to speak for less time between interruptions, and subjected to more and longer interventions by justices compared to male lawyers). The authors also find that, unlike male lawyers, female lawyers do not enjoy the benefit of being treated more deferentially when they represent the winning side. *See id.* at 352. However, they find that this pattern is reversed in oral arguments in cases involving gender-related issues, although the gender differences in this subset of their data were not statistically significant, possibly due to the small number of cases with gendered issues argued by female lawyers. At the least, they show that the male advantage disappears in this portion of the data. *See id.*

¹¹² [Finding that justices are “subject to widespread gender schemas and implicit biases that affect most people in society”] “points to disparate treatment in a place one would least expect to find it, suggesting that men likely receive more deferential treatment from bosses and coworkers in all manner of workplaces compared to their female counterparts.” *Id.* at 349; *see id.* at 354-55.

¹¹³ See Peresie, *supra* note 7, at 1783–84; Boyd, Epstein, and Martin, *supra* note 3, at 392. This also seems consistent with the finding of Patton and Smith, *supra* note 111, that although female lawyers do not enjoy the benefit of being treated more deferentially in oral arguments when they represent the winning side (as male lawyers are), this pattern disappears in cases involving gender-related issues.

more, rather than less, authoritative.¹¹⁴ Why does the one-female 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 male judges will take cues from female judges based on their gender. In that domain a female judge is no longer empowered to sway her male colleagues' 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 female judge in the minority who vigorously 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. Another is that the reinforcement of a female majority increases her propensity to advocate preferences that differ systematically from those of her male colleagues in areas without obvious gender salience, such as class certification.¹¹⁵

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 precedential lawmaking on class certification 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 in precedential cases, with all-Democratic panels having more than double the certification rate of all-Republican panels. We observe some asymmetry whereby one Democrat has substantial positive influence on the probability of a pro-certification outcome when sitting

¹¹⁴ 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 and Karpowitz, *Political Decision-Making Groups*, *supra* note 105, 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 can affect the group’s outcome.” *Id.* See Mendelberg, Karpowitz and Mattioli, *Women’s Influence*, *supra* note 105, at 10 (“more remains to be done to understand the mechanisms of these gender composition effects or the processes by which judges interact”).

¹¹⁵ On the latter view, female judges 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 and Karpowitz, *Group Discussion*, *supra* note 103, at 26. *Cf.* Mendelberg, Karpowitz and Oliphant, *Black Box*, *supra* note 103, 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.

with two Republicans, but one Republican does not significantly reduce the probability of pro-certification outcomes when sitting with two Democrats.

Our findings on race and gender panel effects show that these identity characteristics of judges matter significantly to certification when the panel is making law. We are aware of no prior study that reports panel effects in a policy domain with respect to both gender and race. Our results show that, contrary to conventional wisdom in the scholarship on diversity on the bench, such diversity may be consequential to lawmaking beyond policy areas conventionally thought to be of particular concern to women and racial minorities, which comprise a relatively narrow band of substantive law.

In seeking an explanation for the pro-certification preferences of female and African American judges, we note that class action doctrine is a form of trans-substantive 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 making more pro-certification law, radiate widely across the legal landscape, influencing implementation of consumer, securities, labor and employment, antitrust, prisoner's rights, public benefits, and many other areas of law. 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 trans-substantive 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 anti-discrimination law found that one woman can influence the votes of males in the majority (mirroring what we find with respect to African American judges in class certification decisions). These results allowed 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 more normatively troubling. We observe that women have more pro-certification preferences based on their votes when in the majority. However, women are not more likely to vote in favor of certification 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 pro-certification outcomes. Only when women are in the majority do we observe notably elevated votes for certification by both women in the majority and men in the minority, yielding a higher rate of pro-certification outcomes. Female majority panels 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 possibilities. Several, admittedly speculative, 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 female judge is not empowered to sway her male colleagues' votes by her gender and the perspectives and experience it is presumed to entail. A female judge in the minority who vigorously 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 a female majority increases her propensity to advocate preferences that differ systematically from those of her male colleagues 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 in only the rarest circumstances. That work has been based on sample sizes too small to evaluate majority-female panels, and/or it did not evaluate them. Scholars' inferences from their data were premised on the expectation that if women had different preferences in some policy domains, those preferences would be visible in women's individual-level voting and/or in gender panel effects when women are in a minority. We show that in some domains of law, that assumption is false. Null results at the individual level, and when women are in a panel minority, are entirely consistent with large differences in preferences along gender lines and may reflect suppression of women's influence.

Although we find that the presence of one African American is associated with elevated rates of pro-certification votes and outcomes, we nevertheless believe that our gender results counsel caution as to interpretation of null results associated with any minority judge characteristic (including race) at the individual level or when in a panel minority. 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 not be present with respect to race in another field of law.

APPENDIX

Part I

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 indicating 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 and outcome models (Tables A-2 and A-3).¹¹⁶
- ***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 measuring policy area. Our policy classifications are: civil rights-discrimination, 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 two percent of the data, and we aggregated them into an “other” policy category.
- ***Certification versus decertification***: Indicator variable measuring whether the court was deciding a motion to certify or a motion to decertify.
- ***Circuit fixed effects***: Circuit fixed effects (dummy variables for circuit) account for factors that vary across circuits, such as circuit doctrine which may have a pro- or anti-certification slant, and variation in the size and nature of caseloads across circuits.
- ***Year fixed effects***: Year fixed effects account for any time-varying covariates that take the same value for each judge on a panel, 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 anti-litigation posture in a party agenda.

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 most effectively because it absorbs

¹¹⁶ 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.

and holds constant 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, and in this sense our estimates of the effects of judge identity characteristics are net of the effects of any such variables.

We examined alternative specifications of the models reported in Tables A-1 to A-3 with standard errors clustered on both case and judge. To do so we ran linear probability models using a Stata package (reghdfe) that allows multiple levels of fixed effects and two-way clustering.¹¹⁷ In these models all judge identity characteristic variables are significant at the same threshold levels as in the models reported in Tables A-1 to A-3.

Table 1-A: Logit Model of Certification Votes

	<i>All Cases</i>
<i>Party</i>	.54*** (.08)
<i>Gender</i>	.18 (.12)
<i>Race</i>	.22 (.17)

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), and whether the motion was for certification or decertification.

N=	3,307
Pseudo R ² =	.15

*** $p < .01$; ** $p < .05$; * $p < .1$

Standard errors in parentheses, clustered on case

¹¹⁷ This package implements the estimator developed in Sergio Correia, *Linear Models with High-Dimensional Fixed Effects: An Efficient and Feasible Estimator*, Working Paper (2017) [<http://scoreia.com/research/hdfe.pdf>].

Table 2-A: Logit Model of Panel Effects in Certification Votes

	<i>Model A</i> <i>All Cases</i>	<i>Model B</i> <i>Excluding Discrimination Cases</i>
<i>Party</i>		
<i>Rep voting with 2Rs (reference category)</i>		
<i>Rep voting with 1R & 1D</i>	.42** (.20)	.49** (.23)
<i>Dem voting with 2Rs</i>	.63*** (.20)	.69*** (.23)
<i>Rep voting with 2Ds</i>	.72*** (.21)	.92*** (.25)
<i>Dem voting with 1D & 1R</i>	1.05*** (.21)	1.15*** (.25)
<i>Dem voting with 2Ds (All Dem)</i>	1.10*** (.31)	1.19*** (.37)
<i>Gender</i>		
<i>Male voting with 2 Ms (reference category)</i>		
<i>Male voting with 1M & 1F</i>	.27 (.18)	.14 (.22)
<i>Fem voting with 2Ms</i>	.20 (.18)	.12 (.22)
<i>Male voting with 2Fs</i>	.85** (.34)	.97** (.38)
<i>Fem voting with 1M & 1F</i>	.81** (.34)	.92** (.39)
<i>Race</i>		
<i>White/Other voting with 2 WOs (reference category)</i>		
<i>White/Other voting with 1WO & 1AA</i>	.39** (.20)	.54** (.23)
<i>African Am voting with 2WOs</i>	.42** (.20)	.47** (.23)
<i>White/Other voting with 2AAs</i>	-.40 (.75)	-.88 (.73)
<i>African Am voting with 1AA & 1WO</i>	.05 (.77)	-.36 (.73)

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), and whether the motion was for certification or decertification.

N=	3,287	2,411
Pseudo R ² =	.17	.19

*** $p < .01$; ** $p < .05$; * $p < .1$

Standard errors in parentheses, clustered on case

Table 3-A: Logit Model of Panel Effects in Certification Outcomes

	<i>Model A</i> <i>All Cases</i>	<i>Model B</i> <i>Excluding Discrimination Cases</i>
<i>Party</i>		
<i>3 Republicans (reference category)</i>		
<i>2 Republicans, 1 Democrat</i>	.51** (.22)	.58** (.25)
<i>1 Democrat, 2 Republicans</i>	1.08*** (.23)	1.23*** (.27)
<i>3 Democrats</i>	1.14*** (.31)	1.30*** (.38)
<i>Gender</i>		
<i>3 Males (reference category)</i>		
<i>2 Males, 1 Female</i>	.24 (.19)	.09 (.22)
<i>1 Male, 2 Females</i>	.79** (.34)	.94** (.39)
<i>Race</i>		
<i>All White/Other (reference category)</i>		
<i>2 White/Other, 1 African American</i>	.41* (.22)	.51** (.26)
<i>1 White/Other, 2 African Americans</i>	.05 (.76)	-.42 (.83)
N=	1,089	800
Pseudo R ² =	.17	.19

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), and whether the motion was for certification or decertification.

*** $p < .01$; ** $p < .05$; * $p < .1$

**Table 4-A: Predicted Probabilities of Votes and Outcomes for Certification
for Party, Gender, and Race-Panel Combinations, *Dropping Discrimination Claims***

Votes: Male-Majority Panels

Male voting, with 2 Males (all-Male)	37%
Male voting, with 1 Male & 1 Female	insig different from all-Male
Female voting, with 2 Males	insig different from all-Male

Votes: Female-Majority Panels

Male voting, with 2 Females	61%
Female voting, with 1 Female & 1 Male	60%
Female voting, with 2 Females	insufficient data to estimate

Votes: White/Other-Majority Panels

White/Other voting, with 2 WOs (all-WO)	41%
White/Other voting, with 1 WO & 1 AA	52%
African Am voting, with 2 WOs	51%

Votes: African-American Majority Panels

White/Other voting, with 2 African Ams	insig different from all-White/Other
African Am voting, with 1 AA & 1 WO	insig different from all-White/Other
African Am voting, with 2 AA	no cases

Outcomes: Male-Majority Panels

3 Males	37%
2 Males, 1 Female	insig. different from 3 Males

Outcomes: Female-Majority Panels

2 Females, 1 Male	59%
3 Females	insufficient data to estimate

Outcomes: White/Other-Majority Panels

3 White/Others	41%
2 White/Others, 1 African Am	51%

Outcomes: African American-Majority Panels

2 African Ams, 1 White/Other	insig. different from 3 White/Other
3 African Americans	insufficient data to estimate

Part II

The voter-co-panelist combinations by party, gender, and race in Table 2-A are not suited to comparing votes on panels with specific subsets of party, gender, and race, such as comparisons of votes on panels with two Democratic women versus other female majorities, or

panels with one African American male versus one African American female. In order to facilitate clear comparisons of relevant groups, we estimate vote level models, but control for panel composition using the approach deployed in our outcome model (see Table 3-A): indicator variables for the number of Democrats, females, and African Americans on the panel. We then disaggregate certain variables in order to make comparisons of the probability of pro-certification votes on particular types of panels. All the models described below include the same control variables in the regressions in Table 2-A, with standard errors clustered on case.

We disaggregated panels with two women into variables measuring panels with (1) a majority of Democratic women, and (2) other female majority (a majority of either two Republican women, or one Democratic and one Republican woman). The model contains the same party, gender, and race variables as Table A-3, except that these two variables are substituted for the *1 Male, 2 Females* variable. In a regression excluding the majority Democratic female variable as the reference category for gender, the variable measuring other female majority was clearly statistically insignificant ($p=.47$). The probabilities of pro-certification votes on the two types of panels are statistically indistinguishable. There are insufficient panels with a majority of Republican women (10) to analyze them as a discrete category.

In an alternative specification, we split the variable measuring one female on a panel into two variables measuring (1) one Democratic female, and (2) one Republican female. The model contains the same party, gender, and race variables as Table A-3, except that these two variables are substituted for the *2 Males, 1 Female* variable. In a regression excluding the variable measuring one Democratic female as the reference category for gender, the variable measuring one Republican female was clearly insignificant ($p=.86$). The probabilities of pro-certification votes on the two types of panels are statistically indistinguishable. When all-male panels are left out as the reference category for gender, and both one Democratic female and one Republican female are included in the model, both are clearly insignificant ($p=.21$, and $.43$, respectively).

We disaggregated panels with one African American into variables measuring (1) one African American Democrat, and (2) one African American Republican. The model contains the same party, gender, and race variables as Table A-3, except that these two variables are substituted for the *2 White/Other, 1 African American* variable. In a regression excluding the variable measuring one African American Democrat as the reference category for race, the variable measuring one African American Republican was clearly insignificant ($p=.36$). The probabilities of pro-certification votes on the two types of panels are statistically indistinguishable.

In an alternative specification, we disaggregated panels with one African American into variables measuring (1) one African American male, and (2) one African American female. The model contains the same party, gender, and race variables as Table A-3, except that these two variables are substituted for the *2 White/Other, 1 African American* variable. In a regression excluding the variable measuring one African American male as the reference category for race, the variable measuring one African American female was clearly insignificant ($p=.99$). The probabilities of pro-certification votes on the two types of panels are statistically

indistinguishable. We have too few panels with two African Americans panels (11) to compare subsets of them.

Finally, in the above comparisons of panels with (1) one female Republican versus one female Democrat, (2) one African American Republican versus one African American Democrat, and (3) one African American female versus one African American male, we restricted analysis to panels with one female on the panel in the first case, and one African American on the panel in the latter two. An alternative approach is to make the comparisons between panels containing *at least one* female in the first case, and *at least one* African American in the latter two. All of the results reported above are consistent with that measurement approach.