

Indirect Influences of Gender on the U.S. Court of Appeals: Evidence from Sexual Harassment Law

This paper investigates indirect influences of gender diversification on the U.S. Court of Appeals, focusing upon whether and how women influence policy through pathways other than their individual votes. We analyze workplace sexual harassment cases spanning 1977 to 2006. Building upon recent work showing that women influence the votes of male colleagues when serving with them on three-judge panels, we probe the mechanism driving this pattern, and we find that deliberative processes rather than bargaining dynamics explain gender panel effects. We also find that the extent of doctrine which women have participated in crafting is positively associated with subsequent decisions for the plaintiff, and that the proportion of women on the full circuit, which exercises a monitoring role over individual panels, is associated with panel decisions for the plaintiff. We thus add to work showing that the influence of women on the U.S. Court of Appeals extends well beyond their individual votes.

In this paper we investigate indirect influences of the gender diversification of the federal Court of Appeals on policymaking. By “indirect” influences we refer to influences other than how women judges cast their votes. The longstanding model for studying the influence of judges’ gender on judicial policymaking was to evaluate whether women, on balance, cast votes on case outcomes differently than their male colleagues (e.g., Songer, Davis and Haire 1994; Allen and Wall 1993; Feenan 2009 (reviewing literature)), which we refer to as the direct influence of gender on judging. In recent years, a number of studies focusing on three-judge federal appellate panels have demonstrated that aside from such direct influence, women judges can also affect case outcomes by influencing the votes of their male colleagues. These studies found that in employment discrimination and sexual harassment cases, males serving on three-judge appellate panels with a female colleague were more likely to rule for the plaintiff than men serving on all male panels, though none of the studies were able to demonstrate what specific mechanism was causing these gender “panel effects” (Farhang and Wawro 2004; Peresie 2005; Boyd, Epstein, and Martin 2010).

We build upon this work, investigating the mechanism causing gender panel effects and demonstrating a number of other important and related indirect gender influences on judicial policy output. We exploit features unique to the area of sexual harassment law that enable us to more cleanly distinguish among theoretical predictions regarding the dynamics of collegial decision-making. We find that: (1) deliberative processes rather than bargaining dynamics explain gender panel effects; (2) the extent of Court of Appeals sexual harassment doctrine that women participated in crafting is positively associated with subsequent decisions for the plaintiff; and (3) the proportion of women on the full circuit, which exercises a monitoring role over individual panels, is associated with panel decisions for the plaintiff.

Gender and Judges' Preferences in Civil Rights and Sexual Harassment Cases

Numerous researchers have argued that, as compared to male judges, women judges have a distinctive perspective, grounded in their life experiences as women, which makes them more sensitive to claims of discrimination in general, and sexual harassment in particular (e.g., Sherry 1986; Martin 1990; Beiner 1999: 50-5; Kruse 2005; Feenan 2009: 4). Moreover, many women judges themselves, serving in both state and federal court, and serving at the trial court, intermediate appellate court, and supreme court levels, have expressed a similar view. As compared to their male colleagues, women judges have reported that, based upon their life experiences as women, they have a distinctive perspective and are more receptive to claims of discrimination, including sexual harassment, *and* that within such issue domains women judges can have the effect of educating their male colleagues (Panel 1990: 145; Tobias 1990: 177-78; Abrahamson 1998: 210-11; Werdegar 2001: 35; Wald 2005: 989; Panel 1991: 259-62).

The contention that women judges have a different perspective on issues of discrimination is consistent with survey research that finds that female judges are more likely to perceive discrimination in hypothetical factual scenarios than are male judges (Panel 1991: 259-62). It is also consistent with social psychological experimental research finding that women, as compared to men, perceive a broader range of behaviors as sexually harassing and as constituting a discriminatory hostile work environment (Rotundo et al. 2001; Wiener et al. 1997). In sum, legal scholars, women judges, survey research on judges, and experimental research, all suggest that women have a distinctive perspective on claims of discrimination in general and sexual harassment as a form of discrimination in particular.

Panel Effects and the Norm of Unanimity

Studies finding panel effects—whereby the votes of judges on three-judge federal appellate panels are influenced by their panel colleagues—have proliferated over the past decade. Pioneering work on panel effects by Revesz (1997) and Cross and Tiller (1998) found that Court of Appeals judges’ votes were influenced by the political party of other judges on the panel, proxied by party of the appointing president (see also, e.g., Sunstein et al. 2006; Cross 2007). In addition to the gender panel effects studies cited in the first paragraph, another study has found that white judges vote more liberally in voting rights cases when there is an African-American on the panel (Cox and Miles 2008). The body of panel effects studies establish that, even 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 partisan, gender, or racial minority are able to materially influence the votes of the panel majority.

Scholars have broadly identified two classes of mechanisms to explain such panel effects, one focusing on external constraints and the other on internal panel processes. The *external* class focuses upon panel minorities exercising influence over panel majorities when the minority’s preferences are more aligned with the circuit en banc or the Supreme Court, thus empowering them to credibly threaten to “blow the whistle” with a dissenting opinion and increase the probability of reversal (Cross and Tiller 1998; Kim 2009; Kestellec, forthcoming). The *internal* class focuses upon the mechanisms of deliberation and bargaining for changing majority votes. Before discussing these mechanisms and posing hypotheses relevant to uncovering them, a note

is necessary about the norm of unanimity on the Court of Appeals, which is an important theoretical underpinning to a core component of this paper's analysis.

Decisions by federal appellate panels are overwhelmingly unanimous, with dissent rates aggregated across all circuits averaging approximately 3% to 9%, varying over time and with respect to issue area (Hettinger, Lindquist, and Martinek 2006: 47; Farber 2000: 1430 n.120; Songer, Sheehan, and Haire 2000: 105; Atkins and Green 1976). The institutional propensity toward unanimity on federal appellate panels is sufficiently widespread and well recognized to be regarded as a “norm” by legal and judicial politics scholars (Kim 2009: 1331; Cross 2007: 160; Sunstein et al. 2006: 69; McIver 1976: 757). Some explanations for this phenomenon provide important context for understanding how panel minorities affect panel majorities. The explanations emphasize that on split panels, the majority—which is capable of imposing its will on a would-be dissenter—nevertheless perceives incentives to achieve unanimity. This is due to judges' belief that unanimous court opinions promote the appearance of legal objectivity, neutrality, and certainty, which fosters courts' institutional legitimacy and enhances the probability of compliance with a decision (Hettinger, Lindquist, and Martinek 2006: 19; Edwards 2003: 1651; Atkins 1973: 42-43; Goldman 1968: 479-80). Accordingly, judges confer “in a spirit of ‘give-and-take’ (or accommodation) in an effort to reach decisional consensus and thus avoid public dissension” (Goldman 1968: 479-80). This environment is conducive to achieving unanimity through both deliberation and bargaining.¹

¹ Other explanations for high levels of consensus on federal appellate panels emphasize incentives for would-be dissenters to acquiesce in the majority's preferences rather than writing a dissent for reasons such as heavy workload, social and psychological pressure to conform, and the “loneliness of dissent” (Sunstein et al. 2006: 64-71; Farhang and Wawro 2004: 306-07). Such explanations obviously are not relevant to explaining how the single panel minority influences the panel majority.

The Deliberative Hypothesis

The deliberative hypothesis for panel effects is fundamentally about rational persuasion through the exchange of ideas and information. According to this view, 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 will exchange information and arguments from a wider range of perspectives than will occur on a homogeneous panel, to change their views in the course of deliberations (Kornhauser and Sager 1993; Sunstein et al. 2006; Edwards 2003). The contention that this process explains panel effects is anchored in two premises. The first is that the judge characteristic producing the panel effects (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. (2006: 76) put it, a more diverse panel will likely have a larger “argument pool” than a more homogeneous one, meaning that a wider range of arguments “are far more likely to emerge and to be pressed.” As already discussed, legal scholars, women judges, survey research on judges, and experimental research all suggest that women have a distinctive perspective on claims of discrimination in general and sexual harassment in particular.

The second premise underlying the deliberative hypothesis for gender panel effects is that 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. (2006, 71-73), “group polarization” on three-judge panels, where like-minded judges on homogeneous panels reinforce one another’s positions and go to extremes, can be critically mitigated by persuasive arguments and information offered by a single judge in the

numerical minority. Breaking polarizing homogeneity involves the process of persuasion through the introduction of arguments and information that would otherwise be absent.

In the context of close 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 (Howard 1978). As Carp and Stidham (1991: 176) put it, judges “can be swayed by an articulate and well-reasoned argument from a colleague with a differing opinion.” According to adherents of the deliberative explanation, 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” (Cross 2007: 154-55; see also Edwards 2003: 1656-61; Sunstein et al. 2006: 73). Therefore, as applied to gender, the deliberative explanation for panel effects is that in some kinds of cases women (1) bring a distinctive perspective to bear in the deliberative process, and (2) this persuades men to vote differently than on all-male panels.

The deliberative hypothesis is linked to a related claim that gender panel effects are explained by men taking “cues” from women (Peresie 2005: 1783-84; Boyd, Epstein, and Martin 2010: 392). 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 the latter are perceived to be more credible or expert (Klein 2002: 31). The application of cue taking theory to gender panel effects in sexual harassment cases is based upon the supposition that male judges perceive women as having greater knowledge and credibility in the evaluation of sexual harassment claims. 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 (Lockheed 1985: 409-10; Meeker and Weitzel-O’Neill 1985: 390-91).

We see this account as complimentary with the deliberative hypothesis for minority judge influence. Like the deliberative hypothesis, it supposes that panel effects arise when women have different preferences, take different positions in panel deliberations, and influence male 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 (though of course deference to expertise can be quite 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 blind and abject deference (Cheng 2008: 559). Thus, if the deliberative hypothesis is correct, and if male judges view their female colleagues as having greater expertise and knowledge in sexual harassment claims, then the cue taking effect would heighten and reinforce the deliberative effect.

The Bargaining and Concession Hypothesis

The bargaining hypothesis as an explanation for panel effects contemplates panel minorities, aided by the norm of unanimity, extracting concessions from panel majorities, not changing their minds. According to the bargaining hypothesis, and contrary to the deliberation hypothesis, the minority judge does not change the majority's "best understanding of the law." Rather, majority judges 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 strategically bargain away from their ideal positions for the purpose of enlarging the coalition of justices who will sign on to an opinion (Epstein and Knight 1995; Maltzman, Spriggs, and Wahlbeck 2000; see also Murphy 1964). These studies

focused on strategic concessions by Supreme Court justices necessary to achieve a majority. As already discussed, it is also plausible that similar concessions will be made to enlarge a 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 (Hettinger, Lindquist, and Martinek 2006: 19; Edwards 2003: 1651; Atkins 1973: 42-43; Goldman 1968: 479-80; Baum 1997: 107-08). Recent research further reveals that strategic bargaining dynamics, similar to those identified in the research cited above focusing on the Supreme Court, also occur on three-judge federal appellate panels (Owens and Black 2009). Writing about strategic bargaining on multi-member courts in general, Peterson (1981:418) argues that “[s]ince judges often desire unanimity or, at least, as large a majority as possible, the threat of dissent can be used to gain concessions from the majority.” This logic is particularly forceful on federal appellate panels, where, unlike on the Supreme Court, the norm of unanimity prevails.

As applied to gender panel effects, the bargaining explanation for panel effects is that majority male panels make concessions to women to achieve unanimity, but male judges’ view of the best or correct outcome is not actually influenced by them. Gender panel effects are not explained by women’s persuasion or their enlargement of the “argument pool.” Instead, unpersuaded men make strategic pro-plaintiff concessions to women with the goal of keeping the panel unanimous.

The Precedential Effects Hypothesis

The recent gender panel effects findings showing that women judges can influence their male colleagues’ outcome-votes in the course of collaborative decision-making, also points to the possibility of indirect gender effects that influence doctrine in addition to outcomes. Theory and past empirical work suggest that gender may influence the way decisions are written,

separate from outcome, in ways that are highly consequential to future litigants. Changing the outcome entirely from a win for the defendant to a win for the plaintiff is one clear and strong form of influence. However, much deliberation and bargaining among judges concerns how to fashion doctrine that will accompany and justify the ruling in favor of whichever party prevails (Epstein and Knight, 1998; Maltzman, Spriggs, and Wahlbeck 2000; Choi and Gulati 2008). A ruling for the plaintiff can be accompanied by doctrine that is highly favorable to future plaintiffs, moderately so, or not at all. Likewise for rulings in favor of the defendant. While the outcome of a decision may affect only the parties, the reasoning of a decision may affect whole classes of future litigants. If judges have different perspectives on a case, this can lead them to embrace different legal doctrines to justify the same outcome. For example, Sisk et al. (1998) find that while white and African American district judges were no different in their probability of striking federal sentencing guidelines as unconstitutional, they were markedly different, in important ways, in the doctrine they relied upon to justify doing so. Research reveals that legal doctrine can be an important factor materially influencing the disposition of future cases (e.g., George and Epstein 1992; Klein 2002; Lindquist and Klein 2006).

As applied to the policy effects of gender on judging, this suggests that women judges' influence may extend well beyond the cases which they decide. If women's perspective on sexual harassment cases leads them to be more receptive to the plaintiffs' side, this may be manifest both in a greater likelihood of voting for plaintiffs in the cases they decide, and also in shaping the justification for outcomes (regardless of who wins) in ways that are more favorable to future plaintiffs. If this is true, then the extent of sexual harassment appellate law that women have participated in crafting in the past will increase the probability of a plaintiff prevailing.

The Circuit Effects Hypothesis

The recent gender panel effects studies showing that women judges, in the course of collaborative decision-making on three-judge panels, can influence their male colleagues during panel interactions, suggests the possibility of indirect gender effects at the level of the full circuit as well. Theory and evidence suggest that the preferences of the full circuit have important effects on how cases are decided by subordinate three-judge panels in a variety of ways. The full circuit has the authority to reverse panel decisions via en banc review, and circuit effects on panels are generally theorized to result from this hierarchical relationship. Panels are aware of the full circuit's ideological position and its authority to reverse, and this has the effect of drawing their behavior toward the full circuit's preferences. Researchers have documented effects of circuit preferences on panel decisions ranging from effects upon the ideological direction of case outcomes, to when and how panel effects operate, to the nature of the justifications offered by opinion authors (Farhang and Wawro 2004; Abramowicz and Tiller 2009; Kim 2009; Kastellec, forthcoming).

The hierarchical relations between the full circuit and individual panels points to an additional potential avenue of indirect effects of gender on the policy output of the federal appellate courts. The findings cited above all concerned the relation between the ideology of the full circuit and three-judge panels, with ideology measured based upon the party or policy positions of appointing presidents—and sometimes confirming Senators. Such measures of ideology are only one way of tapping judicial preferences, albeit a very important one. In issue domains in which women judges have distinct policy preferences relative to men, gender can also influence the policy position of the full circuits on which they sit. While women have never comprised a circuit majority, this is not necessary for them to influence the circuit's policy

position in material ways.² As a minority on the circuit, women can contribute to circuit majorities in combination with male judges with similar preferences in some issue domain, such as sexual harassment. To the extent that the deliberative hypothesis is correct, women in the minority could influence the position of the full circuit by influencing the views of their male colleagues. To the extent that cue taking dynamics add to and reinforce the deliberative effect, women judges' influence on the position of the full circuit would be greater. Thus, deliberative and cue taking theory, as explanations for women judges' effects on men, are important beyond panel effects and suggest sources of circuit effects as well. By influencing the position of the full circuit, women judges can have effects on the policy output of subordinate federal appellate panels wholly separate from their decisions when sitting on panels.

Testing Indirect Gender Effects

Before turning to the data, we discuss several issues that are important to our empirical tests of the deliberative, bargaining, precedential, and circuit effects hypotheses.

Substantive versus Non-substantive Issues

Distinguishing between votes on substantive and non-substantive issues is relevant to testing indirect gender effects in a number of ways. The resolution of *non-substantive* issues does not require any consideration whatsoever of whether the conduct alleged amounted to unlawful sexual harassment giving rise to Title VII liability. Examples of non-substantive issues are: whether the statute of limitations has expired; whether the plaintiff falls within the meaning of a covered "employee" as defined by Title VII, as opposed to being a non-protected independent contractor; whether the defendant falls within the definition of a covered

² Theory and evidence in the work of Kim (2009) and Kastlelec (forthcoming) suggest that panel minorities have greater influence on panel majorities when the panel minorities are aligned with circuit majorities. For example, a Democrat sitting with two Republicans has greater influence on the Republican panel majority in circuits in which Democrats are in the majority. Since women never come close to being a circuit majority, this work does not offer predictions about when a single woman will be able to influence the male majority on a panel.

“employer”); and whether the court action is barred by a contractual agreement to waive the right to sue and submit claims to binding arbitration. The critical defining feature of non-substantive issues is that, ostensibly, the legal analysis of their resolution in no way hinges upon judges’ evaluation of the case’s underling allegations of sexual harassment.

To call such issues non-substantive is neither to question their enormous importance, nor to suggest that their resolution is clear-cut, nor to doubt their ideological salience. Such issues are extremely important in the sense that a ruling adverse to the plaintiff will often permanently terminate her sexual harassment claim. Further, non-substantive issues constitute “the rules of the game” for all Title VII claims, rather than being limited to sexual harassment. When judges make legal rules governing the definition of covered employees, the limitations period, or waivers of the right to sue in sexual harassment cases, those rules will generally apply with equal force to plaintiffs in any Title VII claim alleging race, gender, national origin, or religious discrimination. Such issues also often turn upon fundamental policy judgments. For example, the question of how to read Title VII’s statute of limitations—arguably the most clear-cut of non-substantive questions—has twice produced sharply ideologically divided Supreme Court decisions in which first Justice Scalia and then Justice Alito wrote for the Court’s conservative majority, only to be statutorily overridden by Democratic Congresses in the Civil Rights Act of 1991 and the Lilly Ledbetter Fair Pay Act of 2009 (Vogel 1990; Weinberg 2009). Indeed, non-substantive issues surrounding Title VII have as much policy salience and significance within the legal civil rights community as substantive issues, and policy conflicts surrounding them have been among the most rancorous in Title VII’s history (Farhang 2009a; 2009b).

In contrast with non-substantive issues, the resolution of *substantive* issues requires evaluating a plaintiff’s factual allegations of sexual harassment against law governing liability

for sexual harassment. Examples of core substantive issues of liability are: whether the conduct alleged was “severe and pervasive” within the meaning of Title VII doctrine; whether the harassing behavior was motivated by the victim’s gender, making it actionable gender discrimination under Title VII; whether a “reasonable person,” objectively, would find the conduct in question to be so intolerably hostile and abusive as to materially impair her capacity to work; and whether the plaintiff in the case, subjectively, actually did experience it in that way. All of these questions must be answered in the affirmative in order to establish Title VII sexual harassment liability (Conte 2000).

The distinction between substantive and non-substantive issues is pertinent to adjudicating between the deliberative and bargaining hypotheses for explaining gender panel effects. To the extent that women judges introduce a distinctive perspective—rooted in their life experiences—into panel deliberations in sexual harassment cases and thereby persuade their male colleagues, evidence of this would be reasonable to expect in rulings on substantive issues, but *not* in rulings on non-substantive issues. Whether some course of conduct amounts to intimidating sexual harassment is precisely the kind of question on which women judges may bring a distinctive point of view to bear. In contrast, women’s distinctive perspective, as posited above, does not bear upon issues such as whether a statute of limitations has expired or whether an arbitration clause is enforceable. We do not claim that women will vote identically to men on non-substantive issues in sexual harassment cases. Indeed, an important contribution of this paper is to evaluate whether women judges’ votes, in an important set of gender discrimination claims, differ across the two issue types. We maintain only that the literature on gender and judging discussed above does not contemplate that women possess a distinctive perspective that, in conjunction with the deliberative hypothesis, would lead to a prediction of gender panel

effects in non-substantive issues. Similarly, cue taking theory, as we have formulated it, predicts cue taking in substantive but not non-substantive cases. Men may regard women as more expert and credible as evaluators of substantive sexual harassment claims, but they have no reason to do so on non-substantive issues such as statutes of limitations or arbitration clauses.

To the extent that gender panel effects are present in votes across substantive and non-substantive issues that are statistically significant and of comparable magnitude, this would militate against the deliberative hypothesis, because it would suggest that while gender panel effects exist, women's distinctive perspective has no particular importance in explaining them. It would likewise militate against the cue taking hypothesis, as we formulate it, because it would suggest that men are influenced by women even when there is no basis for concluding that women have distinctive expertise and knowledge to be relied upon. Indeed, it would suggest that male judges take cues from women in sexual harassment cases reflexively, without respect to the substance of the issues actually presented. On the other hand, comparable effects in substantive and non-substantive issues would be consistent with the bargaining hypothesis: to the extent that women are simply more likely to favor the plaintiff in sexual harassment cases, regardless of the nature of the issue presented, and they consequently bargain with males toward this end, comparable effects would be expected across substantive and non-substantive issues.³

The distinction between substantive and non-substantive issues is also relevant to evaluating the precedential and circuit effects hypotheses for indirect gender influence. Theory

³ However, findings of gender panel effects in substantive but not non-substantive issues would not contradict the bargaining hypothesis. The bargaining hypothesis is agnostic about whether women will have different preferences in any subset of cases, and maintains only that, when women do have different preferences and are able to change male judges' votes, they are extracting strategic concessions through bargaining. It is possible that women only favor plaintiffs in substantive but not non-substantive cases, and they bargain successfully in those substantive cases. Thus, the finding of gender panel effects in substantive but not non-substantive cases, standing alone, would not allow adjudication between the deliberative and bargaining hypotheses. We will argue below, though, that when such evidence is viewed alongside other empirical tests, it is possible to adjudicate between deliberation and bargaining.

predicts precedential effects in substantive but not non-substantive rulings in sexual harassment cases, for the latter set of issues are extremely heterogeneous. The precedential effects hypothesis does not predict that doctrine crafted by panels with female judges deciding a statute of limitations issue in a sexual harassment case will influence future judges' votes in sexual harassment cases on a contractual arbitration clause. It does predict that doctrine crafted by panels with female judges deciding a core issue of sexual harassment liability may influence future judges' votes when addressing a core issue of sexual harassment liability. Further, a number of the mechanisms theorized to link gender to circuit effects are also theorized to operate in substantive but not non-substantive issues. Women judges' capacity to influence male judges by offering a distinct perspective (per the deliberative hypothesis), and their disproportionate influence based upon perceived expertise and knowledge (per the cue taking hypothesis), both are theorized to operate in substantive but not non-substantive issues, and both represent pathways for women judges to influence the circuit's policy preferences in its oversight function. Thus, theory predicts that gender circuit effects in sexual harassment cases will be concentrated in the domain of substantive issues.

Female Minorities and Female Majorities

In investigating the mechanism(s) driving gender panel effects, it is important to isolate the effects of women on men when women comprise the panel majority, and compare them to cases in which there is at least one woman present. The core logic of the deliberative hypothesis for why panel majorities respond to panel minorities is that the introduction of a single judge with an alternative perspective is critical to breaking the polarizing tendencies of panel homogeneity by enlarging the argument pool. On this view, the critical difference is between homogeneous panels and heterogeneous panels. If women have a distinctive perspective on

sexual harassment issues, then the presence of a woman, as compared to all male panels, will have a propensity to break the polarizing homogeneity, enlarge the argument pool, and influence the votes of male judges. This view suggests that if we isolate the effect of women on men only when women comprise the panel majority, we will observe a lesser additional effect, or none at all, as compared to when we isolate the effect of women on men when there is at least one woman on the panel. We emphatically do not claim that all women will have the same views to offer. We argue only that the deliberative hypothesis maintains that, as compared to all male panels, the presence of at least one woman potentially breaks polarizing homogeneity, and that this is the critical disjuncture for purposes of explaining gender panel effects.

In contrast, to the extent that gender panel effects are driven by women extracting concessions through bargaining, the effect of women on men should be greatest when women are in the majority. The bargaining hypothesis for gender panel effects exerted by a single woman is that, at the level of individual preferences, women are simply more likely to favor plaintiffs in discrimination claims, and they extract concessions from males in the majority by wielding the threat of dissent, implicitly or explicitly, within the context of the norm of unanimity. If this is true, one would expect women judges to have the greatest effect on their male panel colleagues when women are in the majority. Of course, in the bargaining scenario males in the minority will be able to extract concessions with the threat of dissent as well, and thereby to constrain their female colleagues' range of options if the panel is to remain unanimous. But surely women judges in the majority are in a more advantageous bargaining position than women in the minority, and males in the minority are in a less advantageous bargaining position than males in the majority. If bargaining is the key explanation for gender panel effects, then the effect of

women on men should be greatest when women are in the majority. Although this is our only direct test of the bargaining hypothesis, we regard it as a very strong test.

Men's Past Service with Women in Sex Harassment Cases

In considering observable implications of the deliberative hypothesis for gender panel effects, it is evident that the hypothesis can be construed strongly or weakly, with different empirical implications for the strong and weak accounts. Construed strongly, the deliberative hypothesis suggests that panel deliberations can affect judges' understanding of the law in ways that extend beyond the case. Under this view, since rational persuasion by colleagues about the best understanding of the law is driving a judge's sincere understanding, such rational persuasion should have effects in subsequent cases in which that judge addresses the same issue. Construed weakly, the deliberative hypothesis suggests that one judge's rational persuasion is able to affect another panel member's views of the best understanding of the law only as applied to the specific case at hand, with no residual future effects, such that after the case is disposed of the affected judge's views are no different than prior to the deliberations.

There is a straightforward test for the strong deliberative hypothesis for gender panel effects in sexual harassment cases. To the extent that women on a panel have a distinctive perspective which makes them more likely to support the plaintiff, and with this distinctive perspective they are able to influence male panel members' best understanding of the law in durable ways, then that changed understanding should have some influence on those male panel members' treatment of sexual harassment cases in the future, even on all male panels. If the strong version of the deliberative hypothesis is correct, then the frequency with which male Court of Appeals judges have sat with women in the past in sexual harassment cases will be

associated with subsequent support for sexual harassment plaintiffs. Per our earlier discussion, this hypothesis is only sensible in the context of substantive but not non-substantive issues.

Model Specification

We examine sexual harassment cases because they are very well suited to our research questions. Testing the strong deliberative hypothesis entails asking whether past deliberations shape judges' subsequent behavior on the same issue, and testing the precedential effects hypothesis entails asking whether the extent of precedent crafted by panels with women influences the subsequent probability of decisions in favor of the plaintiff on the same issue. In order to test these hypotheses we must have a dataset focusing upon a *discrete issue*. Assessing the strong deliberative and the precedential effects hypotheses also requires a *longitudinal* dataset that will provide a meaningful opportunity to track over time whether male judges' past experience serving with female judges, and the extent of doctrine crafted by panels with women, have the predicted downstream effects. Evaluating whether women holding a majority on panels is important to their influence upon male judges, and evaluating whether there are differences in indirect gender influences across substantive versus non-substantive issues (which is pertinent to all of the hypotheses we test), requires a *large* dataset. This is because panels with two women, and cases presenting non-substantive issues, are a small fraction of total cases and thus a large dataset is necessary to provide sufficient variation across cases to test key issues pertaining to small subsets of the data. Sexual harassment cases (1) present a discrete issue, (2) have been before federal courts for more than three decades, yielding longitudinal data; and (3) have produced a very large number of Court of Appeals decisions.

Past research on indirect influences of female judges has been quite limited in its capacity to investigate the sorts of questions examined here due to lack of longitudinal data and an

insufficient number of cases. Though she did not include it in her statistical model, Peresie (2005: 1784) stated that in her data on sexual harassment decisions in 1999-2001, past service with women was associated with a statistically and substantively significant increase in the likelihood of men voting for the plaintiff. However, she acknowledged that these findings were “weak” and “preliminary” because she lacked information on male judges serving with women prior to 1999, thus treating men who had served in sexual harassment cases with women frequently prior to 1999 identically to men who had never done so, which apparently is why she did not include the variable in her model (2005: 1784 n.102).⁴ Boyd, Epstein, and Martin (2010: 393 n.8) state that they were unable to evaluate whether women holding a majority was material to gender panel effects in employment discrimination cases because their sample did not provide a sufficient number of panels where women were in the majority. Of past studies to evaluate gender panel effects, only Farhang and Wawro (2004) incorporated a measure of women being in the majority in their empirical model, but their data contained only 18 such cases (2004: 317), and thus their capacity to draw inferences on this particular issue was limited.

Our data overcome these limitations. They are all published and unpublished Court of Appeals sexual harassment cases under Title VII of the Civil Rights Act of 1964 contained in the Westlaw database with decision dates through 2006.⁵ The dataset contains 881 cases, comprising 2,643 individual judge votes, between 1977, when sexual harassment claims first reached the federal appellate courts, and the end of 2006. The cases were read in their entirety

⁴ This problem is further compounded by the fact that Peresie did not distinguish between substantive and non-substantive issues. Thus, the count of past experience that she employed included whether men had previously sat with women in sexual harassment cases even if, for example, the only issue was whether a statute of limitations had expired. We not believe that such past experience is sensibly related to men’s future votes in sexual harassment cases presenting core substantive issues of liability for allegedly sexually harassing conduct, or, for that matter, to unrelated non-substantive issues.

⁵ Title VII claims of retaliation for asserting a sexual harassment claim, but where no sexual harassment complaint was actually asserted in court, were not included in the dataset.

and coded for whether they presented substantive or non-substantive issues (according to how those terms are defined above), and for how each judge voted with respect to outcome (0=defendant, 1=plaintiff). Where cases contained both substantive and non-substantive issues, judge votes were coded separately for each. Following the Sunstein et al. (2006) protocol, we coded cases as being for the plaintiff where the plaintiff was granted any relief. To distinguish among competing hypotheses, we present results for three models using the individual judge's vote as the dependent variable. The first model is estimated on votes in all cases in the full dataset, the second on votes on substantive issues, and the third on votes on non-substantive issues.

We include in our specification a dummy variable for each judge's gender (male=0, female=1). We model panel-level effects explicitly by including a battery of variables that indicate the gender and ideological profile of a judge's colleagues on the panel. The way we operationalize gender panel effects avoids imposing monotonicity on their potential impact, which is important to our efforts to adjudicate between the deliberative and bargaining hypotheses. We allow the marginal effect to differ depending on the gender of the judge and the number of female colleagues on the panel. Including a dummy variable that has a value of one if at least one female colleague serves on the panel, and a dummy variable that has a value of one if two female colleagues serve on the panel, allows us to more accurately assess the effect of increasing the number of female colleagues on the panel. We have separate dummies for colleagues' gender that vary depending on the gender of the judge in question in order to properly measure the impact of panel composition. For example, if the judge is female then having one female colleague on the panel implies that it is majority female. But if the judge in question is male, having one female colleague implies that the panel is majority male. The

inferences drawn from the coefficient on the one female colleague dummy are thus very different for male and female judges. The dataset contains 56 cases in which men serve with two women, providing sufficient variation to determine whether women holding a majority on a panel significantly influences their capacity to affect the votes of male judges, as compared to panels in which there is at least one woman serving. Only two cases had all female panels.

We include a variable to account for each judge's ideology, measured as the president's common-space NOMINATE score when an appointment is in a state in which neither senator is from the president's party, and the senator's (or the average of the two senators') NOMINATE score(s) when an appointment is in a state in which one or both senators belong to the president's party (Giles, Hettinger, and Peppers n.d., 2001; McCarty and Poole 1995; Poole and Rosenthal 1997). Panel colleague ideology is measured as the average NOMINATE score of the other two judges serving on the panel. Positive NOMINATE scores represent increasing degrees of conservatism, and negative scores represent increasing degrees of liberalism.

Whether the appellate decision was published or unpublished was also coded. Published decisions make binding law for the circuit, while unpublished decisions only resolve the dispute between the parties (e.g., Law 2005). Because the policy stakes are far higher in published than unpublished cases, panel effects may depend importantly upon whether the decision is published. It may be that panel minorities press harder, through deliberation or bargaining, for influence when the decision will bind the circuit in future cases. It may also be that panel majorities are less amenable to persuasion or concession-making when the decision will bind the circuit in future cases. One past study has found that in more salient cases, judges on federal appellate panels are less likely to be influenced by their panel colleagues (Choi and Gulati 2008). Accordingly, we interacted the variable indicating publication with the panel gender composition

variables and the panel ideology variable in order to assess whether panel effects are conditional upon whether the decision will make binding law.

To test the strong deliberative hypothesis, we include a variable that counts the number of times prior to the current case that a male judge served with female colleagues. This prior experience variable was computed separately for each of the three models: in the full model it is a count of previous service with women in all cases in the dataset; in the model focusing on substantive issues it is previous service with women on panels that addressed substantive issues; and in the model focusing on non-substantive issues it is previous service with women on panels that addressed non-substantive issues. We also include a measure of prior experience in sexual harassment cases with colleagues with more conservative and more liberal ideological preferences, which is simply the sum of the NOMINATE scores of the colleagues that each judge has served with in such cases, computed separately for past service with colleagues appointed by Republican presidents, and with colleagues appointed by Democratic presidents. We do this rather than aggregating the two together because aggregating would have the effect of imposing monotonicity of effects across past service with more conservative and more liberal colleagues.⁶

To test the precedential effects hypothesis, we include counts of the number of past published decisions from panels on which women sat. Precedential effects are operationalized separately as two variables: one counting past cases with women on the panel within the circuit, and one counting past cases with women on the panel decided in other circuits. While within circuit cases are binding law, outside circuit cases are also regularly relied upon by appellate panels, and outside circuit cases have been demonstrated to influence panel decisions across a

⁶ We note that these variables are statistically insignificant in all models, and that in an alternative specification in which the two were collapsed together into a single variable it too was insignificant.

range of policy areas (Klein 2002; Choi and Gulati 2008). If cases were overruled by the circuit en banc or the Supreme Court, they were removed from the count since they ceased to be operative precedent. Like the variable measuring past service with women, the precedential effects variables were computed separately for the full, substantive, and non-substantive models.

To test the circuit effects hypothesis, we include a variable reflecting the proportion of judges on each circuit who are women. In order to ensure that we are isolating the circuit-level effects of gender, we also control for circuit ideology with the median NOMINATE score for each circuit, and we account for other circuit variation by including circuit fixed effects in our models.

Variation in judges' voting can also be explained by case facts and the identity of the litigants (Songer and Haire, 1992; Songer and Sheehan, 1992; Songer et al., 1994). With respect to case facts, we coded whether the plaintiff alleged: (1) *quid pro quo* sexual harassment, where job benefits are conditioned upon the plaintiff submitting to a sexual relationship; (2) other (non *quid pro quo*) sexual advances toward the plaintiff; (3) physical touching; (4) a sexually charged work environment, due, for example, to sexual slurs or the display of sexually offensive material; or (5) same-sex sexual harassment. Each of these variables is coded 1 if the allegations were made, and 0 otherwise. Regarding the identity of the parties, we coded the gender of the plaintiff and the gender of the harasser (male=0, female=1), whether the defendant was a governmental entity (government defendant=1, other=0), and whether the plaintiff was the Equal Employment Opportunity Commission (EEOC plaintiff=1, other=0). Because amicus participation has been demonstrated to influence case outcomes (Collins 2008), we included a count of the number of amicus briefs, if any, that were filed on behalf of the plaintiff.

Case outcomes may also be affected by whether the plaintiff or defendant is appealing the trial court decision, with plaintiffs winning less frequently in employment discrimination cases (Eisenberg and Schwab 1989; Clermont and Eisenberg 2001), and thus we included a variable to account for whether the plaintiff or the defendant was appealing (defendant appeal=0, plaintiff appeal=1). We note that this variable is the functional equivalent of the direction of the lower court decision (a common variable in empirical models of appellate case outcomes), since the party appealing is the party that lost below. We also coded the cases for whether the lower court ruling on appeal was in a pretrial or post-trial posture (pretrial=0, post-trial =1), on the expectation that appellate panels may be less likely to disturb trial court rulings after a full trial.

Since the Supreme Court recognized the sexual harassment cause of action in 1986 in *Meritor Savings Bank v. Vinson*, 477 U.S. 57 (1986), and laid down a framework for adjudicating such claims, we include a dummy variable that equals one for cases decided after this year. Finally, we include a time trend variable in our model to account for any general tendency for panels to render more pro- or anti-plaintiff decisions over time.

We adopted the generalized estimating equations (GEE) approach in order to account for unobserved correlation among judges serving on the same panel. Although the unit of analysis is the individual judge vote, it is a stretch to treat judges serving on the same panel as independent observations, as standard logit analysis does. The norm of unanimity implies that there will be a good deal of unobserved correlation among judges' decisions on a given panel, even after accounting for panel dynamics and case characteristics through measurable covariates. Discussing the utility of GEE and other similar methods for addressing unobserved correlation among the votes of judges on multi-member courts, Zorn (2006: 333) observes that “factors specific to each case, as well as potential interjudge influence in the form of bargaining,

persuasion, and the like might lead one to the conclusion that justice’s votes within a particular case are likely to be related.” We believe that case quality could be a particularly important source of unobserved correlation on the Court of Appeals. Our GEE estimation uses a logit link function and an exchangeable correlation matrix, which involves estimating an additional parameter to account for unobserved correlation. We also estimated models using the matching approach advocated by Boyd et. al (2010), and found panel effects similar to those reported below.⁷

Findings

Table 1 contains descriptive statistics for the full dataset. Table 2 contains the results for the model run on the full dataset, with judge vote on case outcome as the dependent variable. A fair number of the coefficients on variables thought to relate to judges’ votes are statistically significant, and overall the model provides a good fit to the data. We will restrict our discussion, however, to the key variables of interest—gender and ideology. There is a statistically and substantively significant relationship between gender and votes at both the individual judge level and at the panel level. The dummy measuring the gender of the judge and the dummy indicating

⁷ Boyd et. al (2010) reported finding no relationship between gender and voting in sexual harassment cases, either at the individual or panel level. Our data enabled us to replicate almost exactly the propensity score model that they used (the only difference is that our data lack a judicial experience variable) and to specify exactly the same logistic regression model to compute average treatment effects. We found no effect for the variable measuring the gender of the individual, but did find panel effects for gender in the matched dataset. Differences between their results and ours appear to result from the data analyzed rather than the methods employed. Our dataset is substantially larger than theirs, and our dataset is far more homogeneous in issue content, being comprised purely of employment sexual harassment claims asserted under Title VII of the Civil Rights Act of 1964. We have explained above why a dataset focused upon a discrete issue facilitates the inquiry undertaken here. Their dataset is much more heterogeneous in its substantive coverage, combining together sexual harassment claims asserted in the context of both employment and education (under Title IX of the Education Amendments of 1972); including claims of illegal retaliation for having alleged sexual harassment; apparently also including state law causes of action brought in federal court via pendant or diversity jurisdiction; as well as other important differences. Their sexual harassment data was compiled by Sunstein et. al, who collected the sexual harassment data with a search in the Lexis published Court of Appeals database using the search “sex! harassment” (2006: 159, notes 10 and 12 (explaining how the data was collected)). We note that this search would not pick up cases that did not contain the phrases “sex harassment” or “sexual harassment,” but used the legally equivalent phrase “hostile environment”; or the phrase “harassment based upon gender”; or for that matter the phrase “sexually harassed.” Thus, in addition to including case types other than Title VII sexual harassment claims (such as Title IX claims), the Sunstein et al. data also does not include Title VII sexual harassment claims not captured by their somewhat narrow search formulation.

that a male judge is serving with at least one female colleague have coefficients that are statistically distinguishable from zero. We computed marginal effects in the form of simulated probabilities (with 95% confidence intervals around those probabilities) by setting each variable equal to its median value and then manipulating them in theoretically relevant ways (Herron 2000). A male judge who has median values for the other variables in the model has a .35 probability of voting for the plaintiff, with 95% confidence bounds at [.16, .57]. A female judge has a .42 probability of voting for the plaintiff, with 95% confidence bounds at [.21, .65].

When a male judge serves with a female colleague, his probability of voting for the plaintiff is .39 [.18, .63]. This is a substantively significant increase. We recognize that women's votes may also be influenced by their male colleagues as well, but we lack a sufficient number of all female panels (there were only two) to establish a benchmark of how women would vote in sexual harassment cases in the absence of any males on the panel.

For male judges, serving with two female colleagues is not associated with any additional increase in the probability of a vote for the plaintiff over what we observe when they serve with at least one female colleague. Consistent with this, women judges' votes are not influenced by serving with another woman. Models with the data subset into votes on substantive issues and votes on non-substantive issues are displayed in Tables 3 and 4. The finding that men vote more liberally in sexual harassment cases when serving with at least one woman on the panel remains statistically significant and of comparable magnitude in the model of votes on substantive issues, and it becomes statistically insignificant in the model of votes on non-substantive issues.

Women judges' influence on men's votes is concentrated in the domain of substantive sexual harassment liability, and it disappears when votes on non-substantive issues are isolated.

We find a statistically significant coefficient on the interaction between the publication variable and the dummy for a male judge serving with at least one female colleague. However, the magnitude of the effect is not meaningful, as measured by the percentage point change in male judges' probability of voting for the plaintiff. In both unpublished and published cases, the presence of at least one woman increases the probability by four percentage points. The significance of this interaction term is not robust to subsetting the data into substantive and non-substantive votes. The coefficient on the interaction falls just below conventionally accepted levels of statistical significance in the substantive model, and well below in the non-substantive model. In general, the data indicate that male judges' amenability to persuasion or concession-making when deciding cases with female colleagues is not materially affected by whether the case will make binding law.

The past service with women variable is insignificant in the full model, and in the model focusing on non-substantive issues. Consistent with the strong deliberative hypothesis, though, the past service variable is statistically distinguishable from zero and positive in the model focusing on substantive votes, indicating that the more frequently men have previously served with women on panels deciding sexual harassment cases, the more likely they are to subsequently rule for the plaintiff. However, the magnitude of the effect is extremely small. An increase of one standard deviation in the past service variable is associated with an increase in the likelihood of a vote for the plaintiff by less than one percentage point. Indeed, for an increase in this variable over its full range (0 to 18), the increase in the predicted probability of a vote for the plaintiff is only approximately four percentage points. We regard this magnitude as weak because very few male judges took on values for the past service variable at the upper end of the range. The mean value for the variable is only 1.4. To the extent that men's past service

with women in sexual harassment cases addressing substantive issues has any influence on their subsequent votes on such issues, the magnitude of the effect is not meaningful other than in rare cases of men with extensive past service with women.

As already discussed, a number of past studies have found gender panel effects in civil rights cases, but none have been able to offer evidence regarding the nature of the processes leading to women's influence upon men. The findings discussed so far provide new insights into those processes. As they pertain to the underlying mechanism driving gender panel effects, the findings are consistent with the weak form of the deliberative hypothesis, but provide only slight support to the strong form of the deliberative hypothesis, and are inconsistent with the bargaining hypothesis. To the extent that gender panel effects are explained, per the bargaining hypothesis, by women extracting concessions through bargaining, then women holding a majority on a panel should increase their bargaining power, and correspondingly increase the concessions they can extract with it. However, we find that being in a majority does not add to women's influence upon male judges.

To the extent that gender panel effects are explained, per the deliberative hypothesis, by women breaking polarizing homogeneity on all male panels by adding to the "argument pool" based upon distinctive perspectives and experiences grounded in gender, the addition of a second woman is predicted to have a substantially lesser additional effect or none at all, which is what we find. Further, the deliberative hypothesis predicts gender panel effects in sexual harassment cases in the model of votes on substantive issues, but not non-substantive issues, which is also what we find. Women's influence upon men exists precisely in the area in which scholars, survey research, and experimental social psychology have suggested—where substantive issues of discrimination are involved. At the same time, the evidence suggests that any durable

influence on men's future behavior in sexual harassment cases resulting from past deliberations with women is vanishingly small other than in rare instances of men with extensive past experience serving with women. The deliberative effects are essentially limited to the case at hand. On balance, the evidence thus supports the weak form of the deliberative hypothesis, and rejects both the strong form of the deliberative hypothesis and the bargaining hypothesis as material influences on male judges' voting behavior in sexual harassment cases.

Both variables measuring the extent of existing precedent which women participated in creating are insignificant in the full model and in the model focusing on non-substantive issues. However, consistent with the precedential effects hypothesis, in the model of votes on substantive issues these variables emerge as statistically significant and positive, indicating that more precedent decided by women is associated with an increased likelihood of a decision for the plaintiff. From a baseline probability of a vote for the plaintiff of .30 [.11, .57], an increase of one standard deviation in the number of intracircuit published cases with a woman on the panel (11, about one-fifth of its range) increases the probability of a vote for the plaintiff to .37 [.16, .65]; and an increase of one standard deviation in the number of intercircuit published cases (63, less than one-third of its range) is associated with an increase in probability to .47 [.17, .80]. Consistent with the conjecture in some past research, in issue domains in which women judges have distinct preferences, the policy effects of those preferences extend beyond case outcomes. They influence, as well, the content of precedent, which affects the disposition of future cases.

The coefficient on the variable measuring the proportion of women sitting as active judges on each circuit is statistically significant in both the full model and the model of votes on substantive issues, and the substantive effect is comparable and quite large in both. The coefficient is not statistically distinguishable from zero in the model of non-substantive votes. In

the full model, from a baseline probability of a vote for the plaintiff of .35, an increase of one standard deviation in this variable (.1, which is less than a quarter of its range) increases the predicted probability to .49 [.24, .73]. In the model of substantive votes, the same change in the percentage of women on the circuit increases the predicated probability of a vote for the plaintiff from a baseline of .30 to a probability of .44 [.19, 73]. It is not possible for us to pin down the precise mechanism that is producing this effect. As we have already suggested, there are a number of pathways that may be working together. Women certainly contribute to the size of the coalition on the full circuit (which has review authority over all panels) that is potentially more pro-plaintiff in sexual harassment cases. Consistent with our findings at the three-judge panel level, they are also likely affecting the views of male judges at the full circuit level through the deliberative process within the sphere of substantive issues, and if cue taking is operative, it would be reinforcing this effect. In an alternative specification, we assessed whether gender panel effects are conditional upon the proportion of women on the circuit and found that they are not.⁸

While our focus here is on gender, the findings regarding the effects of ideology provide an illuminating contrast to the gender findings. In the model estimated with full data set (Table 2) and the model of votes on substantive issues (Table 3), the coefficients on the variable measuring the ideology of the judge are bounded away from zero, while the coefficients on the ideological profile of the judge's colleagues on the panel are not. For the ideology measure, an increase in the conservative direction of one standard deviation (.37, about one-third of this variable's range) is associated with a reduction of about 3 percentage points in the probability of a vote for the plaintiff in both models. In these models, judges are not affected by the ideology

⁸ Past work suggests that such conditionality might occur in circuits in which women held a circuit majority (Kim, 2009; Kastellec, forthcoming), but this has never occurred.

of their colleagues. However, in the model of votes on non-substantive issues (Table 4), the effects of ideology are larger and panel effects emerge. A one standard deviation increase in a judges' ideology score is associated with a 5 percentage point reduction in the probability of a vote for the plaintiff, and a one standard deviation increase in the ideology score of panel colleagues (about one-quarter of this variable's range) is associated with a reduction of 7 percentage points. In all three models variables, the coefficients on the variables measuring the cumulative past exposure to liberal and conservative colleagues in sexual harassment cases are statistically insignificant.

These findings show notable differences in how preferences grounded in gender operate in sexual harassment cases as contrasted with preferences grounded in ideology. Gender effects are concentrated in the domain of substantive issues concerning what actually constitutes unlawful sexual harassment, and they disappear in sexual harassment cases when the focus shifts to non-substantive issues (which can nevertheless determine case outcomes). This is true with respect to judges' gender at the individual level, gender panel effects, precedential effects, and the proportion of women on the circuit. In contrast, the influence of ideology increases moving from substantive issues to non-substantive issues. While ideology effects exist at the individual level in substantive issues of sexual harassment liability, when the focus shifts to the "rules of the game" for Title VII lawsuits in general, their magnitude grows at the individual level, and panel effects emerge.

Implications

Our findings build upon recent research on panel effects in general, and gender panel effects in particular. Though gender panel effects have been repeatedly shown to exist, the internal panel processes that produce this pattern have not previously been investigated. We

conclude that the evidence supports the weak form of the deliberative hypothesis. As compared to all male panels, the addition of a single female judge breaks the polarizing homogeneity and changes the way men vote, and this effect exists only in substantive issues of sexual harassment liability. Within sexual harassment cases, when voting on non-substantive issue—a domain in which no one has argued that women have a distinctive perspective relative to men—women vote no differently than men, and men sitting with women vote no differently than men sitting on all male panels. We conclude that the strong form of the deliberative hypothesis receives only very weak support, as past experience deliberating with women over substantive sexual harassment issues does not have a meaningful influence on men’s subsequent outcome votes in sexual harassment cases unless they have a magnitude of past service with women that is both very large and very rare. The bargaining hypothesis is not supported as an important source of gender panel effects, because women holding the majority does not add materially to their influence upon male colleagues.

The important differences we observe in the significance of gender across issue types stands in contrast to ideology. Liberalism is associated with greater likelihood of ruling in favor of the plaintiff across both substantive and non-substantive issues. Our finding that gender as an influence on judicial voting is tied to the substance of the issue presented, and not more generally to the nature of the lawsuit, is new. Past research on gender and judicial behavior has consistently focused upon the type of lawsuit, rather than the type of issue actually presented, supposing implicitly that gender would be associated with favoring some kinds of parties (most often, civil rights plaintiffs), rather than being restricted to certain substantive issues. Within the sphere of sexual harassment cases, this supposition of a more general pro-plaintiff orientation would be accurate with respect to ideology, but it is not with respect to gender.

The recent gender panel effects findings also pointed to other potential indirect gender influences on Court of Appeals decision-making that extend beyond case outcomes. We found that more precedent decided by panels with women on them increased the probability of subsequent rulings for the plaintiff on three-judge panels. We also found that the percentage of women on the full circuit likewise increased the probability of rulings for the plaintiff. Neither of these pathways of indirect gender influence had previously been tested, and both add to the growing body of work suggesting that the influences of gender diversity on the U.S. Court of Appeals radiate more widely than can be appreciated from studying only the votes of individual women judges.

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Table 1: Descriptive statistics for analysis of sexual harassment cases in the U.S. Court of Appeals, 1977–2006

	Mean	Median	Std. Dev.	Min.	Max.
Vote for plaintiff	0.333	0	0.471	0	1
Gender	0.169	0	0.375	0	1
One female colleague (male judge)	0.265	0	0.441	0	1
Two female colleagues (male judge)	0.019	0	0.138	0	1
One female colleague (female judge)	0.039	0	0.193	0	1
One female colleague (male judge) × published	0.166	0	0.372	0	1
Two female colleagues (male judge) × published	0.012	0	0.108	0	1
One female colleague (female judge) × published	0.023	0	0.151	0	1
Prior service with female judges	1.374	0	2.385	0	18
Ideology score	0.056	0.092	0.371	-0.625	0.587
Panel colleagues' ideology scores	0.056	0.054	0.274	-0.625	0.581
Panel colleagues' ideology scores × published	0.043	0	0.228	-0.625	0.581
Prior panels' ideology scores (Democrats)	-1.345	-0.814	1.641	-10.806	0.035
Prior panels' ideology scores (Republicans)	1.707	1.010	1.919	-0.225	10.098
Published	0.700	1	0.458	0	1
Government defendant	0.380	0	0.486	0	1
EEOC plaintiff	0.019	0	0.138	0	1
Amicus brief	0.079	0	0.351	0	4
Party who appealed	0.834	1	0.381	0	2
Posture	0.272	0	0.445	0	1
Plaintiff gender	0.899	1	0.301	0	1
Harasser gender	0.050	0	0.218	0	1
Same sex harassment	0.072	0	0.258	0	1
Quid pro quo	0.173	0	0.378	0	1
Sexual advances	0.427	0	0.495	0	1
Sexually charged	0.600	1	0.490	0	1
Touching	0.456	0	0.498	0	1
Post-Vinson	0.968	1	0.175	0	1
Percent female judges on circuit	0.207	0.230	0.098	0	0.430
No. of prev. published cases w/ female judges in circuit	13.193	11	10.981	0	56
No. of prev. cases w/ female judges in other circuits	117.109	133	63.454	0	222
Median ideology score for circuit	0.116	0.225	0.229	-0.523	0.516
1st Circuit dummy	0.028	0	0.166	0	1
2nd Circuit dummy	0.093	0	0.291	0	1
3rd Circuit dummy	0.052	0	0.222	0	1
4th Circuit dummy	0.058	0	0.234	0	1
5th Circuit dummy	0.087	0	0.282	0	1
6th Circuit dummy	0.083	0	0.276	0	1
7th Circuit dummy	0.153	0	0.360	0	1
8th Circuit dummy	0.146	0	0.354	0	1
10th Circuit dummy	0.108	0	0.310	0	1
11th Circuit dummy	0.064	0	0.244	0	1
D.C. Circuit dummy	0.023	0	0.149	0	1
Time trend	23.494	25	5.453	1	30

$N = 2643$; number of cases = 881.

Table 2: GEE results for model of judges' votes in sexual harassment cases in the U.S. Court of Appeals, 1977–2006

	Point estimate	Std. Err.	<i>p</i> value
Intercept	1.483	1.222	0.225
Gender	0.312	0.138	0.024
One female colleague (male judge)	0.421	0.158	0.008
Two female colleagues (male judge)	-1.004	1.008	0.319
One female colleague (female judge)	-0.771	1.001	0.441
One female colleague (male judge) × published	-0.215	0.115	0.062
Two female colleagues (male judge) × published	0.369	1.127	0.743
One female colleague (female judge) × published	0.358	1.088	0.742
Prior service with female judges	0.010	0.012	0.415
Ideology score	-0.416	0.156	0.008
Panel colleagues' ideology scores	-0.264	0.418	0.527
Panel colleagues' ideology scores × published	-0.030	0.366	0.935
Prior panels' ideology scores (Democrats)	-0.004	0.016	0.809
Prior panels' ideology scores (Republicans)	-0.015	0.019	0.440
Published	1.590	0.290	0.000
Government defendant	-0.384	0.183	0.036
EEOC plaintiff	1.178	0.634	0.063
Amicus brief	0.501	0.200	0.012
Party who appealed	-2.122	0.301	0.000
Posture	-0.144	0.254	0.572
Plaintiff gender	0.396	0.428	0.354
Harasser gender	-0.908	0.534	0.089
Same sex	0.428	0.465	0.357
Quid pro quo	0.350	0.232	0.132
Sexual advances	0.350	0.202	0.084
Sexually charged	0.504	0.190	0.008
Touching	0.416	0.196	0.034
Post-Vinson	0.388	0.806	0.630
Percent female judges on circuit	6.045	2.239	0.007
No. of prev. published cases w/ female judges in circuit	0.023	0.016	0.168
No. of prev. cases w/ female judges in other circuits	0.009	0.006	0.127
Median ideology score for circuit	-0.504	0.780	0.518
Time trend	-0.225	0.085	0.008
Estimated correlation parameter	0.901		
Expected % correctly predicted	70		

Note: Table entries are GEE estimates using a logit link. $N = 2643$; number of cases = 881. Circuit fixed effects are not reported to conserve space.

Table 3: GEE results for model of judges' votes in sexual harassment cases on the U.S. Court of Appeals with substantive issues, 1977–2006

	Point estimate	Std. Err.	<i>p</i> value
Intercept	1.939	1.389	0.163
Gender	0.264	0.163	0.105
One female colleague (male judge)	0.394	0.185	0.033
Two female colleagues (male judge)	-1.269	1.098	0.248
One female colleague (female judge)	-0.956	1.091	0.381
One female colleague (male judge) × published	-0.216	0.136	0.113
Two female colleagues (male judge) × published	0.709	1.242	0.568
One female colleague (female judge) × published	0.822	1.203	0.494
Prior service with female judges	0.028	0.017	0.087
Ideology score	-0.446	0.178	0.012
Panel colleagues' ideology scores	-0.153	0.455	0.736
Panel colleagues' ideology scores × published	-0.212	0.399	0.595
Prior panels' ideology scores (Democrats)	-0.003	0.016	0.830
Prior panels' ideology scores (Republicans)	-0.025	0.019	0.175
Published	1.587	0.337	0.000
Government defendant	-0.420	0.209	0.045
EEOC plaintiff	1.591	0.552	0.004
Amicus brief	0.311	0.244	0.202
Party who appealed	-2.041	0.373	0.000
Posture	-0.232	0.319	0.468
Plaintiff gender	0.246	0.506	0.626
Harasser gender	-1.049	0.611	0.086
Same sex	0.385	0.550	0.484
Quid pro quo	0.051	0.281	0.857
Sexual advances	0.485	0.235	0.039
Sexually charged	0.866	0.226	0.000
Touching	0.316	0.229	0.167
Post-Vinson	0.314	0.910	0.730
Percent female judges on circuit	6.635	2.614	0.011
No. of prev. published cases w/ female judges in circuit	0.039	0.021	0.070
No. of prev. cases w/ female judges in other circuits	0.016	0.009	0.067
Median ideology score for circuit	-1.129	0.943	0.231
Time trend	-0.273	0.094	0.004
Estimated correlation parameter	0.899		
Expected % correctly predicted	70		

Note: Table entries are GEE estimates using a logit link. $N = 2025$; number of cases = 676. Circuit fixed effects are not reported to conserve space.

Table 4: GEE results for model of judges' votes in sexual harassment cases on the U.S. Court of Appeals with only procedural issues, 1977–2006

	Point estimate	Std. Err.	<i>p</i> value
Intercept	1.035	2.011	0.607
Gender	0.778	0.571	0.173
One female colleague (male judge)	0.760	0.564	0.177
Two female colleagues (male judge)	-0.970	0.599	0.105
One female colleague (female judge)	-1.049	0.597	0.079
One female colleague (male judge) × published	-0.082	0.061	0.184
Prior service with female judges	0.003	0.014	0.834
Ideology score	-0.499	0.242	0.039
Panel colleagues' ideology scores	-1.023	0.473	0.031
Panel colleagues' ideology scores × published	0.124	0.088	0.160
Prior panels' ideology scores (Democrats)	-0.003	0.013	0.812
Prior panels' ideology scores (Republicans)	-0.000	0.006	0.952
Published	2.195	0.543	0.000
Government defendant	0.742	0.354	0.036
EEOC plaintiff	-0.362	1.107	0.744
Amicus brief	1.021	0.521	0.050
Party who appealed	-1.643	0.443	0.000
Posture	0.393	0.342	0.251
Plaintiff gender	0.911	0.579	0.116
Harasser gender	0.341	0.694	0.623
Same sex	-1.212	0.628	0.054
Quid pro quo	0.885	0.411	0.031
Sexual advances	-0.033	0.368	0.929
Sexually charged	-0.191	0.371	0.606
Touching	1.028	0.412	0.013
Post-Vinson	-1.250	1.465	0.393
Percent female judges on circuit	3.207	3.709	0.387
No. of prev. published cases w/ female judges in circuit	-0.004	0.080	0.964
No. of prev. cases w/ female judges in other circuits	0.032	0.027	0.235
Median ideology score for circuit	-0.697	1.278	0.585
Time trend	-0.137	0.148	0.355
Estimated correlation parameter	0.988		
Expected % correctly predicted	70		

Note: Table entries are GEE estimates using a logit link. $N = 1099$; number of cases = 367. Circuit fixed effects are not reported to conserve space.