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Deliberation and Strategy on the United States Courts of Appeals: An Empirical Exploration of Panel Effects

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Deliberation and Strategy on the
United States Courts of Appeals:
An Empirical Exploration of Panel Effects

Pauline T. Kim^{*}

Abstract

Recent studies have established that decision-making by federal court of appeals judges is influenced not only by the preferences of the judge, but also the preferences of her panel colleagues. Although the existence of these “panel effects” is well documented, the reasons they occur are less well understood. Scholars have proposed a number of competing theories to explain panel effects, but none has been established empirically. In this Article, I report an empirical test of two competing explanations of panel effects—one emphasizing deliberation internal to a circuit panel, the other hypothesizing strategic behavior on the part of circuit judges. The latter explanation posits that court of appeals judges act strategically in light of the expected actions of others, and that therefore, panel effects should depend upon how the preferences of the Supreme Court or the circuit en banc are aligned relative to those of the panel members. Analyzing votes in Title VII sex discrimination cases, I find no support for the theory that panel effects are caused by strategic behavior aimed at inducing or avoiding Supreme Court review. On the other hand, the findings strongly suggest that panel effects are influenced by circuit preferences. Both minority and majority judges on ideologically mixed panels differ in their voting behavior depending upon how the preferences of the circuit as a whole are aligned relative to the panel members. This study provides evidence that panel effects do not result from a dynamic wholly internal to the three judges hearing a case, but are influenced by the environment in the circuit as a whole as well.

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INTRODUCTION	1
I. COMPETING EXPLANATIONS	8
A. <i>Panel Effects</i>	8
B. <i>Theoretical Accounts</i>	9
II. TESTING THE STRATEGIC ACCOUNT	15
A. <i>Existing Evidence</i>	15
B. <i>Constructing An Empirical Test</i>	17
C. <i>Data and Empirical Analysis</i>	24
III. RESULTS	30
A. <i>The Supreme Court as Reviewing Court</i>	30
B. <i>The Circuit En Banc as Reviewing Court</i>	32
IV. DISCUSSION AND IMPLICATIONS	37
A. <i>The Role of the Supreme Court and the Circuit En Banc</i>	37
B. <i>Internal Panel Dynamics</i>	40
CONCLUSION	43
APPENDIX	45

INTRODUCTION

One of the central institutional features of the United States Courts of Appeals is the use of judicial panels to decide cases. Rather than having a single appellate judge decide each appeal, or even having a group of appellate judges deciding in isolation and tallying their votes, the appeals process is specifically structured to promote a collaborative form of decision-making.¹ Three appellate judges are assigned to decide a case together, and they typically share their background research, sit together as a panel to hear oral arguments, meet to discuss their views and issue a single opinion resolving the appeal.² Of course, not all cases are typical, and judges sometimes dissent or concur separately. These instances are relatively infrequent, however, and cases involving separate opinions are viewed as deviations from the usual model of appellate decision-making. Thus, as D. C. Circuit Judge Harry Edwards puts it, “judging on the appellate level is a *group* process.”³

As a matter of institutional design, why are federal appellate courts structured in this way? Certainly it is not for the sake of efficiency, for the same number of judges sitting alone could decide appeals more quickly than when sitting with two of their

¹ For a detailed description of the organizational structure of the federal appellate courts, see JONATHAN MATTHEW COHEN, *INSIDE APPELLATE COURTS: THE IMPACT OF COURT ORGANIZATION ON JUDICIAL DECISION MAKING IN THE UNITED STATES COURTS OF APPEAL* (2002).

² *Id.* at 125-62.

³ Harry T. Edwards, *The Effects of Collegiality on Judicial Decision Making*, 151 U. PA. L. REV. 1639, 1656 (2003) (hereafter *Effects of Collegiality*).

colleagues. Most explanations focus on the quality of decision-making.⁴ Kornhauser and Sager, for example, assert that increasing the number of judges making a decision will increase the probability that a court will reach a correct decision.⁵ So long as each judge is more likely than not to decide correctly, a correct outcome is more likely whenever a group of judges decides by majority vote.⁶ Others have suggested that this error-reducing effect is enhanced by the exchange of ideas and information that occurs during the process of deliberation.⁷ For example, Judge Edwards describes the interactions among judges on an appellate panel as “a process of dialogue, persuasion and revision”⁸ that enables them to “find common ground and reach better decisions.”⁹

From an empirical perspective, it is difficult to test these claims in the absence of consensus regarding what makes one decision “better” than another. However, scholars *have* collected considerable evidence suggesting that decision-making by a federal court of appeals judge sitting on a three-judge panel differs from what one might expect from that judge sitting alone. In light of the considerable evidence that judges’ votes correlate with their political affiliation,¹⁰ one might suppose that federal appellate judges have

⁴ See, e.g., Evan H. Caminker, *Sincere and Strategic Voting Norms on Multimember Courts*, 97 MICH. L. REV. 2297, 2362 (1999) (citing argument that the purpose for a multi-member appellate court is to increase accuracy); Edwards, *Effects of Collegiality*, *supra* note 3, at 1640-41 (arguing that collegiality on appellate panels enables judges to “reach better decisions”); Douglas H. Ginsburg & Donald Falk, *The Court En Banc: 1981-1990*, 59 GEO. WASH. L. REV. 1008, 1035-36 (1990-91) (suggesting that decisions involving more judges are more likely to be correct). Cf. Michael E. Solimine, *Ideology and En Banc Review*, 67 N.C. L. REV. 29, 40 (1988-89) (reporting that en banc review is justified by the belief that the involvement of more judges leads to sounder decisions).

⁵ Lewis A. Kornhauser & Lawrence G. Sager, *Unpacking the Court*, 96 YALE L. J. 82, 100 (1986-87).

⁶ *Id.* at 97-99.

⁷ See, e.g., Caminker, *supra* note 4, at 2372 (suggesting that collegial deliberation will enhance the accuracy of decision-making).

⁸ Edwards, *Effects of Collegiality*, *supra* note 3, at 1661.

⁹ *Id.* at 1641.

¹⁰ See e.g., Frank B. Cross & Emerson H. Tiller, *Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155 (1998); C. K. ROWLAND & ROBERT A. CARP, *POLITICS AND JUDGMENT IN FEDERAL DISTRICT COURTS* 24-57 (1996); Richard L. Revesz, *Environmental Regulation, Ideology, and the D. C. Circuit*, 83 VA. L. REV. 1717 (1997); Donald R. Songer & Susan Haire, *Integrating Alternative Approaches to the Study of Judicial Voting: Obscenity Cases in the U.S. Courts of Appeals*, 36 AM. J. POL. SCI. 963 (1992); Donald R. Songer & Reginald S. Sheehan, *Supreme Court Impact on Compliance and Outcomes: Miranda and New York Times in the United States Courts of Appeals*, 43 W. POL. Q. 297 (1990); CASS R. SUNSTEIN, DAVID SCHKADE, LISA M. ELLMAN & ANDRES SAWICKI, *ARE JUDGES POLITICAL? AN EMPIRICAL ANALYSIS OF THE FEDERAL JUDICIARY* (2006) (hereafter, SUNSTEIN ET AL., *ARE JUDGES POLITICAL?*); Cass R. Sunstein, David Schkade & Lisa Michelle Ellman, *Ideological Voting on Federal Courts of Appeals: A Preliminary Investigation*, 90 VA. L. REV. 301 (2004) (hereafter, Sunstein et al., *Ideological Voting*).

basic policy preferences that they express through their votes,¹¹ and that panel decision-making simply reflects the aggregation of those preferences through a majority-vote rule. Thus, one might expect that the likelihood that a particular judge would vote for a particular outcome (for example, upholding an affirmative action plan) would be stable, regardless of whether she sat with one, two or no other like-minded judges. In fact, federal appeals court judges are *not* observed to vote the same way regardless of panel composition, but instead appear to be influenced by the preferences of the other judges with whom they sit when deciding a case. This phenomenon—commonly referred to as “panel effects”—has been documented in a wide variety of legal contexts.¹²

In one of the earliest studies, Richard Revesz examined the votes of D.C. Circuit judges in environmental cases and concluded that “while individual ideology and panel composition both have important effects on a judge’s vote, the ideology of one’s colleagues is a better predictor of one’s vote than one’s own ideology.”¹³ Similarly, Frank B. Cross and Emerson H. Tiller analyzed D.C. Circuit cases involving the application of the *Chevron* doctrine to agency actions, and concluded that judges’ votes were influenced not only by their political affiliation, but also by the composition of the panel on which they sat.¹⁴ More recently, Cass R. Sunstein, David Schkade, Lisa M. Ellman and Andres Sawicki investigated voting patterns on federal appellate panels across circuits and in a variety of legal areas.¹⁵ In most of the issue areas they examined,

¹¹ The fact that judges’ votes correlate with party affiliation does not mean that they are not following legal doctrine. Legal rules are inevitably “open textured,” allowing for the exercise of judgment. In these areas where legal discretion exists, judges may pursue policy goals without necessarily violating legal norms. See Pauline T. Kim, *Lower Court Discretion*, 82 N.Y.U. L. Rev. 383 (2007).

¹² See Cross & Tiller, *supra* note 10; Revesz, *supra* note 10; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10; Sunstein et al., *Ideological Voting*, *supra* note 10; David S. Law, *Strategic Judicial Lawmaking: Ideology, Publication, and Asylum Law in the Ninth Circuit*, 73 U. CIN. L. REV. 817 (2005); Thomas J. Miles & Cass R. Sunstein, *Do Judges Make Regulatory Policy? An Empirical Investigation of Chevron*, 73 U. CHI. L. REV. 823 (2006); Adam B. Cox & Thomas J. Miles, *Judging the Voting Rights Act*, 108 COLUM. L. REV. 1 (2008).

Studies exploring the influence of female and racial minority judges on appellate decision-making have similarly found evidence of panel effects. See Sean Farhang & Gregory Wawro, *Institutional Dynamics on the U.S. Court of Appeals: Minority Representation Under Panel Decision Making*, 20 J.L. ECON. & ORG. 299, 320 (2004); Charles M. Cameron & Craig P. Cummings, *Diversity and Judicial Decision-Making: Evidence from Affirmative Action Cases in the Federal Courts of Appeals, 1971-1999* (unpublished manuscript), at 25; Christina L. Boyd, Lee Epstein & Andrew D. Martin, *Untangling the Casual Effects of Sex on Judging* (2007) (unpublished manuscript); Jennifer L. Peresie, *Note: Female Judges Matter: Gender and Collegial Decisionmaking in the Federal Appellate Courts*, 114 YALE L. J. 1759 (2005).

¹³ Revesz, *supra* note 10, at 1764.

¹⁴ Cross & Tiller, *supra* note 10, at 2171.

¹⁵ Sunstein et al.’s initial study focused on cases involving abortion rights, affirmative action, campaign finance, capital punishment, Commerce Clause challenges to congressional enactments, the Contracts Clause, criminal appeals, disability discrimination, industry challenges to environmental regulation, piercing the corporate veil, race discrimination, sex discrimination, sexual harassment and claimed takings of private property without just compensation. Sunstein et al., *Ideological Voting*, *supra* note 10, at 304.

they found evidence that a judge's votes are correlated not only with her own political affiliation, but with the political affiliations of her co-panelists as well.¹⁶ In some instances, the influence of panel colleagues even appears to swamp individual preferences. Thus, for example, a Republican appointee sitting with two Democratic appointees is *more* likely to vote to uphold affirmative action programs than a Democratic appointee sitting with two Republican appointees.¹⁷ Clearly, then, the fact that federal appellate judges hear cases in panels of three makes a difference in their decision-making.

Although the existence of panel effects is well documented, the reasons that they occur are not clearly understood. Scholars have proposed a number of explanations, but none of these theories has been conclusively established.¹⁸ This Article empirically explores *when* panel effects occur in an effort to better understand *why* they occur. More specifically, it offers an empirical test of two competing types of explanations: deliberative and strategic.

By deliberative explanations, I mean to identify those theories that emphasize the internal exchanges that occur among panel members and the potential for these exchanges to influence a judge's vote. For purposes of the empirical test undertaken here, the exact mechanism of how judges influence one another is not critical. It may be the case that they come to persuade one another through the exchange of information and the power of reasoned argument.¹⁹ Alternatively, psychological mechanisms, such as

In their follow-up study, the analysis was expanded to include cases involving commercial speech, congressional abrogation of state sovereign immunity, the Federal Communications Commission, gay and lesbian rights, the National Labor Relations Board, the National Environmental Policy Act, obscenity, standing, school and racial segregation and punitive damages. SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 8.

¹⁶ In nearly all of these issue areas, Sunstein et al. found evidence of both ideological voting and panel effects. The exceptions to this general pattern were cases involving criminal appeals, takings of private property, punitive damage awards, standing to sue and Commerce Clause challenges. In these areas, they found no difference in the voting patterns of judges based on party affiliation. *Id.* at 48. In cases involving abortion restrictions and capital punishment, however, they found that although judges vote ideologically, their votes do *not* appear to be influenced by their colleagues. Cases involving gay and lesbian rights seemed to exhibit a similar pattern of ideological voting, but no influence from panel composition; however, these cases were too few in number to draw any firm conclusions about whether panel effects are present or not.

¹⁷ Republican appointees vote to uphold affirmative action programs 37% of the time when sitting on all Republican-appointee panels, 49% of the time when sitting with one Republican appointee and one Democratic appointee, and 65% of the time when sitting with two Democratic appointees. Sunstein et al., *Ideological Voting*, *supra* note 10, at 319. For Democratic appointees, the reverse pattern holds: 82% vote in favor of upholding affirmative action programs on an all Democratic appointee panel; 80% when sitting with one Democratic appointee and one Republican appointee; and 61% when sitting with two Republican appointees. *Id.*

¹⁸ See Sunstein et al., *Ideological Voting*, *supra* note 10, at 307; Revesz, *supra* note 10, at 1755-56.

¹⁹ See, e.g., Edwards, *Effects of Collegiality*, *supra* note 3; Farhang & Wawro, *supra* note 12, at 308, and sources cited therein.

conformity pressures or group polarization may be operative, leading judges to change their minds when confronted with the opinions of their colleagues.²⁰ The critical point, for purposes of this study, is that pure deliberative accounts attribute panel effects to the dynamics internal to the members of a panel, rather than any interaction with other actors in the judicial system.

By contrast, strategic theories explain observed panel effects as the result of strategic behavior by appellate judges.²¹ These theories posit that when deciding cases, individual judges advance their goals not simply by exercising their discretion in a manner consistent with their policy preferences, but by taking into account the likely responses of others actors as well.²² Rather than naively voting their preferences, court of appeals judges are hypothesized to act with an eye to the expected behavior of the Supreme Court and the circuit sitting en banc, as well as their panel colleagues.²³ An appellate judge will decide whether to vote her sincere preference or to accommodate the views of her colleagues based on her beliefs about the likelihood of further review and the probable outcome if the case is reviewed. Unlike purely deliberative explanations, strategic theories suggest that panel effects will depend upon the preferences of the Supreme Court and/or the circuit as a whole, not just the preferences of the three judges comprising an appellate panel.

Strategic theories play an important role in some accounts of the federal judicial hierarchy. Many scholars have suggested that the risk of reversal assures that lower court judges follow the doctrines set out in Supreme Court precedent, even those with which

²⁰ See, e.g., SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 63-78.

²¹ See, e.g., Cross & Tiller, *supra* note 10, at 2159. See also VIRGINIA A. HETTINGER, STEFANIE A. LINDQUIST & WENDY L. MARTINEK, JUDGING ON A COLLEGIAL COURT 47 (2006).

²² In recent years, strategic theories of judicial behavior have become prominent in the political science and legal literatures. See, e.g., William N. Eskridge, Jr., *Overriding Supreme Court Statutory Interpretation Decisions*, 101 YALE L. J. 331 (1991) (describing establishment of statutory policy as dynamic game between Court, Congress, and President in which each tries to impose its policy preferences in light of expected responses of other players); McNollgast, *Politics and the Courts: A Positive Theory of Judicial Doctrine and the Rule of Law*, 68 S. CAL. L. REV. 1631 (1995) (modeling judicial decision-making as product of strategic interactions between upper and lower courts); Donald R. Songer, Jeffrey A. Segal & Charles M. Cameron, *The Hierarchy of Justice: Testing a Principal-Agent Model of Supreme Court-Circuit Court Interactions*, 38 AM. J. POL. SCI. 673 (1994) (same); Gregory A. Caldeira, John R. Wright & Christopher J. W. Zorn, *Sophisticated Voting and Gate-Keeping in the Supreme Court*, 15 J.L. ECON. & ORG. 549 (1999) (empirically testing whether Supreme Court Justices engage in strategic voting in certiorari decisions); Forrest Maltzman & Paul J. Wahlbeck, *Strategic Policy Considerations and Voting Fluidity on the Burger Court*, 90 AM. POL. SCI. REV. 581 (1996) (empirically testing whether Supreme Court Justices act strategically in changing their votes between initial conference and final vote); Paul J. Wahlbeck, James F. Spriggs, II & Forrest Maltzman, *Marshalling the Court: Bargaining and Accommodation on the United States Supreme Court*, 42 AM. J. POL. SCI. 294 (1998) (empirically testing whether Supreme Court opinions are written strategically based on examination of draft opinions).

²³ See Cross & Tiller, *supra* note 10, at 2156; HETTINGER ET AL., *supra* note 21, at 41.

they disagree.²⁴ However, given the tens of thousands of cases decided by the courts of appeals each year, the Supreme Court's limited reversal power can only be effective if it has some mechanism for identifying appropriate cases for review. One hypothesis is that court of appeals judges dissent in order to signal the Supreme Court that certain cases deviate from established doctrine and should be reviewed.²⁵ Other scholars have described the relationship between a circuit court and a three-judge panel in similar manner.²⁶ Just as the Supreme Court monitors and occasionally reverses the decisions of the lower federal courts, a circuit sitting en banc can review and revise a panel decision that is inconsistent with circuit precedent or norms. This form of monitoring is costly, however, and so scholars have suggested that the circuit will rely on signals, such as the presence of a dissenting opinion, to identify which panel decisions warrant closer scrutiny.²⁷

In order to test these two competing explanations for panel effects, I begin with the observation that strategic accounts—unlike purely deliberative ones—predict that appellate voting behavior will be influenced by interactions with a reviewing court. More specifically, if appellate judges act strategically—with an eye to the likely response of the Supreme Court or the circuit en banc—then observed panel effects should differ depending upon how the preferences of the appellate judges on the panel are aligned relative to those of the Supreme Court or the circuit as a whole. By contrast, if purely deliberative explanations are true, the preferences of the Supreme Court or circuit as a whole should have no systematic effect on whether or when panel effects are observed.

In the empirical test described here, I analyze data about judges' votes in Title VII sex discrimination cases decided by the U.S. Court of Appeals.²⁸ Sex discrimination cases are often perceived to be ideologically contested, and scholars have documented the existence of both ideological voting and panel effects in these types of cases.²⁹ Most prior studies of panel effects have used the party of the appointing President as a proxy for judicial ideology,³⁰ then compared the voting records of Republican-appointed and

²⁴ See, e.g., Charles M. Cameron, Jeffrey A. Segal & Donald Songer, *Strategic Auditing in a Political Hierarchy: An Informational Model of the Supreme Court's Certiorari Decisions*, 94 AM. POL. SCI. REV. 101, 102 (2000); Tracey E. George & Albert H. Yoon, *The Federal Court System: A Principal-Agent Perspective*, 47 ST. LOUIS U. L.J. 822 (2003); Songer et al., *supra* note 22, at 675.

²⁵ See Cross & Tiller, *supra* note 10, at 2173; HETTINGER ET AL., *supra* note 21, at 76.

²⁶ See, e.g., Tracey E. George, *The Dynamics and Determinants of the Decision to Grant En Banc Review*, 74 WASH. L. REV. 213, 245 (1999).

²⁷ See *id.*; HETTINGER ET AL., *supra* note 21, at 76.

²⁸ See Part II.C., *infra* for a more detailed description of the data.

²⁹ See, e.g., SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 30-31; Boyd et al., *supra* note 12; Peresie, *supra* note 12.

³⁰ See, e.g., Cross & Tiller, *supra* note 10; Revesz, *supra* note 10; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10; Sunstein et al., *Ideological Voting*, *supra* note 10; Cox & Miles, *supra* note 12; Miles & Sunstein, *supra* note 12.

Democrat-appointed judges across different panel compositions. In this study, I follow the convention of using the party of the appointing President to identify potential ideological alignments—for example, I assume that a Republican-appointed judge sitting with two Democrat-appointed judges is in the “ideological minority,” while the two Democratic-appointees are the “majority” judges on that panel.

Unlike prior studies, however, I do not rely on the “percent liberal” vote to measure judges’ voting behavior. Instead, I examine the extent to which judges vote counter-ideologically—that is, in a direction opposite to what would be predicted by a naïve ideological model. This methodological innovation permits a focus on the central phenomenon of interest: the changing likelihood that a judge will vote counter to a naïve ideological prediction depending upon the panel composition. In the empirical test, I examine whether observed panel effects—the change in the likelihood of a counter-ideological vote under different voting conditions—is contingent upon the preferences of the Supreme Court or the circuit en banc.

Using this method, I find no evidence that panel effects are influenced by the relative preferences of the Supreme Court. More specifically, I observe no difference between the voting patterns of minority or majority judges on mixed panels regardless of whether the minority judge is more closely aligned with Supreme Court or the panel majority. This finding casts doubt on one explanation of hierarchical control—namely, the theory that appellate judges’ voting behavior is motivated by the desire to signal noncompliant decisions to the Supreme Court. On the other hand, I find evidence that the tendency of appeals court judges to be influenced by their panel colleagues *does* depend on how the preferences of the circuit court as a whole are aligned relative to those of the panel members. When a minority judge on a panel is ideologically closer to the circuit as a whole than to the panel majority, the majority judges are less likely to vote in a stereotypically ideological direction, while the minority judge is more likely to do so. This result is consistent with a strategic explanation for panel effects, although the exact mechanism by which circuit preferences influence panel behavior remains uncertain. What the results do indicate is that panel effects are not the result of a dynamic wholly internal to the three-judge panel, but are influenced by the circuit environment.

This Article proceeds as follows: Part I surveys the competing theoretical explanations that have been offered to explain panel effects. Part II explains the limitations of existing empirical tests and then describes my approach for testing strategic accounts of panel decision-making. In Parts III and IV, I present the results of the empirical tests and then consider the implications of my findings.

I. COMPETING EXPLANATIONS

A. Panel Effects

As described more fully in Part II, *infra*, this study analyzes data on judges' votes in Title VII sex discrimination cases. In the analysis and discussion that follows, I characterize a vote in favor of the sex discrimination plaintiff as "liberal" and a vote against the plaintiff as "conservative."³¹ Table 1 shows that, as one might expect, the percentage of cases with a liberal outcomes varies depending upon the composition of the panel.

Table 1. Federal Court of Appeals Decisions in Sex Discrimination Cases, 1995-2002, by Panel Composition

PANEL COMPOSITION	NUMBER OF OBSERVATIONS	% LIBERAL OUTCOMES
RRR	186	25.8%
RRD	354	38.4%
RDD	199	49.2%
DDD	48	79.2%

Table 2 further breaks down the data. Consistent with prior studies, it shows that Democratic appointees vote in favor of plaintiffs in these cases more often than Republican appointees (51.9% of the time as compared with 34.2% of the time), but that judges' votes are influenced by the partisan affiliation of the other members of the panel as well as their own. For example, a Republican appointee sitting with two Democratic appointees votes liberal 44.2% of the time. However, her voting pattern becomes steadily more conservative when she sits with one other Republican appointee (37.7% liberal votes) or two other Republican appointees (26.2% liberal votes). A similar pattern holds true for Democratic appointees.

³¹ This treatment is consistent with prior studies of judicial decision-making in sex discrimination and Title VII cases. See, e.g., Boyd et al., *supra* note 12; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10; Sunstein et al., *Ideological Voting*, *supra* note 10.

Table 2. Voting of Federal Court of Appeals Judges in Sex Discrimination Cases, 1995-2002, by Party of Appointing President and Panel Colleagues

REPUBLICAN APPOINTEES			DEMOCRATIC APPOINTEES		
Panel Colleagues	Number of observations	% Liberal Votes	Panel Colleagues	Number of observations	% Liberal Votes
DD	199	44.2%	RR	354	41.5%
RD	708	37.7%	DR	398	51.5%
RR	558	26.2%	DD	144	78.5%
All cases	1465	34.2%	All cases	896	51.9%

Of critical importance, the different outcomes across panel composition seen in Table 1 do *not* reflect only simple majoritarian voting. If judges naively voted their policy preferences and case outcomes were determined by majority vote, then judges would exhibit a stable voting pattern regardless of the identity of their panel colleagues. As Table 2 clearly shows, this is not the case. Alternatively, one might expect that a judge in the ideological minority might be influenced by her colleagues, but that the two judges in the ideological majority would not. After all, the majority has the votes to achieve its policy goals directly. Once again, however, this is not the case, for judges in the ideological majority are also observed to vote differently when a judge affiliated with the opposing party is on the panel. Thus, the phenomenon of “panel effects” encompasses *two* distinct effects: judges in the majority vote differently (in a less stereotypically ideological fashion) than judges on a homogeneous panel, and judges in the minority vote differently (still less stereotypically ideologically) than judges in the majority.

B. *Theoretical Accounts*

What accounts for these observed panel effects? Scholars have proposed a variety of explanations, encompassing cultural, psychological, institutional and strategic factors. In order to frame an empirical test, I group these explanations into three basic types. As a caveat, I do not mean to argue that this typology is canonical in any sense, and each type of explanation I identify encompasses a number of diverse theories. Rather than definitively categorizing theories, this typology merely serves to sharpen the empirical inquiry here.

One type of explanation focuses on the relatively low dissent rates in court of appeals decisions. A simple ideological model of voting would predict frequent dissents whenever a panel of judges is divided ideologically. In fact, the proportion of federal appellate decisions containing dissents is quite low, around 10% overall.³² Some scholars explain the high levels of unanimity by positing the importance of a “norm of consensus.”³³ Frequent dissents are thought to undermine institutional legitimacy and the clarity of legal rules,³⁴ while unanimous decisions “promote the appearance of legal objectivity, certainty and neutrality,”³⁵ and encourage compliance with the law.³⁶ Other scholars emphasize the costliness of dissent to the individual judge.³⁷ Writing a dissenting opinion requires time and effort, and may negatively impact a judge’s reputation and collegial relations,³⁸ while offering very little payoff. A dissent has no substantive effect on the outcome of a case, at least in the short term, and writing one does not relieve a judge of her responsibilities for drafting opinions in other cases. These types of theories offer strong reasons that a judge in the ideologically minority will often suppress her disagreement and go along with the decision of the majority.

Although these theories of “suppressed dissent” offer a plausible account of why dissents are relatively infrequent on the courts of appeals, they cannot explain panel effects more generally. As noted above, panel composition influences not only the behavior of the minority judge, but the behavior of the judges who comprise the panel majority as well.³⁹ As Revesz argued, if judges go along with their colleagues simply to avoid writing a dissent, one would predict that on mixed panels, “the single judge of one party is the only one to moderate his or her views.”⁴⁰ The costs of writing a dissent might lead a minority judge to avoid openly expressing her disagreement, but should have no impact on the votes of the panel majority. Similarly, a norm of consensus has

³² See HETTINGER ET AL., *supra* note 21.

³³ See, e.g., Farhang & Wawro, *supra* note 12, at 307, and sources cited therein; Burton M. Atkins, *Judicial Behavior and Tendencies Towards Conformity in a Three Member Small Group* 54 SOC. SCI. Q. 41 (1973).

³⁴ HETTINGER ET AL., *supra* note 21 at 19; Edwards, *Effects of Collegiality*, *supra* note 3, at 1651.

³⁵ Farhang & Wawro, *supra* note 12, at 307.

³⁶ HETTINGER ET AL., *supra* note 21, at 19-20.

³⁷ See, e.g., Revesz, *supra* note 10, at 1733; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 64-66.

³⁸ *Id.* at 66. Dissents force the majority judges to confront public disagreement with their conclusions and may oblige them to respond to arguments raised by the dissent or to defend more carefully the conclusions they reach. See Ginsburg & Falk, *supra* note 4, at 1017 (“Even one dissident judge can impose upon me the cost, in time and aggravation, of having to respond to a dissenting opinion”).

³⁹ See Part II.A., *supra*.

⁴⁰ Revesz, *supra* note 10, at 1734.

more explanatory power for minority, not majority judges. Such a norm might sometimes induce the majority to accommodate the views of the minority, but it seems more likely to lead them to ignore the preferences of the minority, knowing that the strong norm of unanimity will pressure the minority member to go along.⁴¹ Thus, while theories of dissent suppression are certainly relevant, they are insufficient to explain the observed influence of panel composition on the behavior of both minority *and* majority judges on mixed panels.

The second type of explanation—what I call “internal deliberative” explanations—focuses on dynamics internal to the judicial panel. One such explanation is that panel effects are the product of collegial interactions among appellate judges. This explanation is consistent with how many judges describe the decision-making process and has been most forcefully advanced by Judge Harry Edwards. He writes, “if panel composition turns out to have a ‘moderating’ effect on judges’ voting behavior, this is a sign that panel members are behaving collegially.”⁴² As a judge on the D.C. Circuit Court of Appeals, he found that co-panelists listen to one another’s views and arguments “seriously and respectfully, and . . . with open minds.”⁴³ The result of this process of “collegial deliberation” is that individual judges sometimes shift their initial view of a case.⁴⁴ In Edwards’s view, the observation that a judge’s vote is influenced by her co-panelists is not merely unsurprising; it also illustrates the advantages of panel decision-making: judges deliberate collegially, “discussing the case with each other and reach[ing] a mutually acceptable judgment based on their shared sense of the proper outcome.”⁴⁵

Sunstein et al. propose another set of explanations that focuses on internal panel dynamics—explanations rooted in the findings of experimental psychology. They cite studies documenting a “conformity effect,” where individuals in experimental settings are observed to yield their views in the face of unanimous group opinion to the contrary,⁴⁶ and argue that “judges are vulnerable to similar influences.”⁴⁷ Analogizing the minority judge to the experimental subject confronted with a unanimous group opinion, they argue

⁴¹ As Sunstein et al. point out, “a Democratic majority, or a Republican majority, has enough votes to do what it wishes.” SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 12.

⁴² Harry T. Edwards, *Collegiality and Decision Making on the D.C. Circuit*, 84 VA. L. REV. 1335, 1358 (hereafter *Collegiality and Decision Making*).

⁴³ *Id.* at 1361.

⁴⁴ Edwards, *Effects of Collegiality*, *supra* note 3, at 1660.

⁴⁵ Edwards, *Collegiality and Decision Making*, *supra* note 42, at 1358.

⁴⁶ SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 67. They explain that “this yielding . . . occurs partly because of the information suggested by the unanimity of others; how could shared views be wrong? And partly because of reputational pressures: people do not want to stand out on a limb for fear that others will disapprove of them.” Sunstein et al., *Ideological Voting*, *supra* note 10, at 339.

⁴⁷ *Id.*; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 69.

that the tendency to conform to dominant opinion explains why dissents are far less common on the court of appeals than a naïve ideological model would predict. In order to explain the apparent moderation of majority judges on a mixed panel compared with their votes on a homogeneous panel, Sunstein et al. turn to another established finding in the experimental psychology literature: group polarization.⁴⁸ Specifically, after deliberating with a group of people with similar views, individuals tend to express more extreme views than they held before deliberation.⁴⁹ Thus, “deliberating groups of like-minded people tend to go to extremes.” Comparing an ideologically homogeneous panel to a group of “like-minded people,” Sunstein et al. argue that the phenomenon of group polarization is at work, leading all-Republican and all-Democratic panels to more extreme opinions than would be arrived at by mixed panels.⁵⁰

In contrast to dissent suppression theories and internal deliberative accounts, strategic explanations focus on interactions between the appellate judges on a panel and the other actors in the judicial system in order to explain panel effects. These accounts posit that appellate judges do not pursue their policy goals naively, but rather act strategically, with an eye to the likely response of the Supreme Court or the court of appeals en banc. For example, Virginia Hettinger, Stefanie Lindquist and Wendy Martinek propose a strategic explanation of when appellate judges dissent. They hypothesize that circuit judges “may choose to dissent to signal the circuit *en banc* that the majority panel opinion is contrary to circuit law or contrary to the preferences of the circuit majority,” or “to signal the Supreme Court and thereby invite review by that body.”⁵¹ As they recognize, dissenting opinions might also be suppressed if circuit judges who disagree with the majority opinions nevertheless believe that en banc or Supreme Court review will produce an outcome even worse from their perspective than the panel majority opinion.⁵² Thus, any predictions about whether or not a circuit judge will dissent “will depend on the configuration of preferences across the relevant actors: the judge, the three-judge panel, and the circuit [or the Supreme Court] as a whole.”⁵³ Their theory, however, focuses narrowly on the decision to dissent, rather than panel effects generally.

Cross and Tiller offer a closely related theory of how strategic behavior produces observed panel effects. Similarly to Hettinger et al., they assume that appellate judges use dissents as a signal to the Supreme Court or the circuit en banc. However, their

⁴⁸ *Id.* at 71.

⁴⁹ Explanations for this phenomenon of “group polarization” include the limited pool of arguments available in a group of like-minded people, the desire of individuals to be perceived favorably by other group members and the effect of corroboration in strengthening individual views. *Id.* at 73 -76.

⁵⁰ *Id.* at 76.

⁵¹ HETTINGER ET AL., *supra* note 21, at 41.

⁵² *Id.*

⁵³ *Id.*

theory focuses not so much on accounting for dissenting behavior as explaining why lower court judges obey precedent.⁵⁴ Following doctrine poses no difficulties where it leads to a result consistent with a circuit judge's preferences. However, when existing doctrine does *not* coincide with her policy goals, she may be tempted to disregard it. In such a situation, Cross and Tiller theorize that a panel member who differs ideologically from the majority will act as a "whistleblower." By dissenting, the minority has the ability to "expose the majority's manipulation or disregard of the applicable legal doctrine,"⁵⁵ alerting a higher court to the disobedient decision-making and leading to reversal of the original majority opinion. Alternatively, the threat to "expose disobedient decision-making by the majority" may cause the majority to acknowledge its "disregard" of doctrine and decide to "keep its decision within the confines of doctrine."⁵⁶ Cross and Tiller therefore predict that "courts are more likely to comply with doctrine . . . when the judicial panel is politically or ideologically divided."⁵⁷

This "whistleblowing" theory is consistent with models that positive political theorists commonly use to describe the judicial hierarchy.⁵⁸ Briefly, these models analogize the relationship between the Supreme Court and the lower federal courts to a principal-agent relationship. The Supreme Court creates doctrine which their "agents", the lower federal courts, are supposed to apply faithfully. However, lower court judges have their own preferences and may be tempted to deviate from established doctrine. Principal-agent models are thus centrally concerned with questions of supervision and control—that is, "how and to what extent can the Supreme Court control the behavior of lower federal courts to ensure that its policy dictates are implemented?"⁵⁹ One common answer is that lower federal court judges follow Supreme Court doctrine because they "fear exposure of any non-compliance and consequent reversal."⁶⁰ The Supreme Court, however, only has the capacity to review a tiny fraction of court of appeals decision—

⁵⁴ Cross & Tiller, *supra* note 10, at 2156.

⁵⁵ *Id.* at 2156.

⁵⁶ *Id.* at 2159. Judge Wald has expressed skepticism about this account based on her experience as a judge on the D.C. Circuit Court of Appeals: "threats of dissent are not particularly effective in changing a panel's course." Patricia M. Wald, *A Response to Tiller and Cross*, 99 COLUM. L. REV. 235, 253 (1999). Judge Harry Edwards has been even more blunt: "the hypothesis is absurd." Edwards, *Collegiality and Decision Making*, *supra* note 42, at 1337.

⁵⁷ Cross & Tiller, *supra* note 10, at 2159.

⁵⁸ For a more detailed discussion of principal-agent models of the federal judicial hierarchy, see Kim, *supra* note 11, at 391-404.

⁵⁹ *Id.* at 393.

⁶⁰ *Id.* at 2158. See also, George & Yoon, *supra* note 24; McNollgast, *supra* note 22; Songer et al., *supra* note 22.

less than 1% per year.⁶¹ Cross and Tiller’s “whistleblowing” theory offers one possible mechanism by which the Supreme Court might efficiently monitor and control the decisions of the courts of appeals—relying on dissenting opinions to signal cases of non-compliance that warrant review.

Theorists have similarly analogized the relationship between a circuit court and its three-judge panels to an agency relationship.⁶² On this view, individual judges are not free to decide as they like, but must act as “representatives” of the circuit.⁶³ A three judge panel is “deputed to hear and to determine cases in conformity with the law as the full court views it.”⁶⁴ To ensure that this representative function is carried out faithfully, the majority of the full circuit is permitted to overrule a panel decision by rehearing a case en banc.⁶⁵ Like the Supreme Court, however, the circuit as a whole will find it costly to monitor the decisions of each panel. To solve this monitoring problem, the circuit may rely on signals such as the presence of a dissenting opinion to determine which cases to rehear en banc, and circuit court judges, aware of this possibility, may vote strategically in order to invite or avoid en banc review of a panel’s decision.

Both Hettinger et al.’s strategic dissent theory and Cross and Tiller’s whistleblower theory draw some support from the fact that the presence of a dissenting opinion is associated with both a greater likelihood that a case will be reheard en banc⁶⁶ and that the Supreme Court will grant certiorari.⁶⁷ However, this observed correlation does not necessarily prove that dissenting opinions *cause* the circuit en banc or the Supreme Court to review a case. It may be that both the existence of a dissent and the decision to rehear or accept certiorari are the result of some underlying characteristic of the case—for example, that it involves a particularly difficult or close legal issue.

⁶¹ See Kim, *supra* note 11, at 30. Scholars have suggested various mechanisms by which even a low rate of reversal might induce compliance. For example, Songer, Segal and Cameron hypothesize that litigant policing plays a crucial role, hypothesizing that losing parties are more likely to petition for Supreme Court review when the lower court opinion is “non-compliant,” thereby sounding a “fire alarm” that alerts the Court to cases of “flagrant doctrinal shirking.” Songer et al., *supra* note 22, at 693. McNollgast argue that the Supreme Court exercises effective control by establishing a “doctrinal interval” of acceptable outcomes in order to induce lower courts to follow its precedent. McNollgast, *supra* note 22, at 1645-46. These explanations have been criticized on theoretical grounds, and the handful of relevant empirical studies generally do not support the theory that fear of reversal motivates lower court compliance with doctrine. See Kim, *supra* note 11, at 399-404, and sources cited therein.

⁶² George, *supra* note 26, at 245; Ginsburg & Falk, *supra* note 4, at 1011-13; Michael E. Solimine, *Ideology and En Banc Review*, 67 N.C.L. REV. 29, 49 (1988-89).

⁶³ *Id.*

⁶⁴ Ginsburg & Falk, *supra* note 4, at 1011.

⁶⁵ Solimine, *supra* note 62, at 49.

⁶⁶ George, *supra* note 26, at 267; Ginsburg & Falk, *supra* note 4, at 1046.

⁶⁷ Caldeira et al., *supra* note 22.

Moreover, even if the relationship between dissents and further review is a causal one, a considerable gap remains between the large number of court of appeals cases containing dissents and the very limited number accepted for Supreme Court or en banc review.⁶⁸ Thus, while the presence of a dissent may encourage the Supreme Court or circuit en banc to hear a case, it remains uncertain whether the possibility of a dissent and subsequent review actually influences the panel behavior of court of appeals judges.

II. TESTING THE STRATEGIC ACCOUNT

A. Existing Evidence

This empirical study is primarily focused on testing strategic explanations for panel effects. Although existing empirical evidence is consistent with both dissent suppression and internal deliberative theories, these explanations are difficult to test directly. Support for these theories tends to come either from self-reports of circuit judges who emphasize the importance of collegiality⁶⁹ or from the experimental psychology literature which relies on behavior observed in laboratory settings.⁷⁰ The reliability of self-reports is open to question, however, and as discussed further in Part IV.B., *infra*, the significant differences between experimental settings and decision-making by appellate judges raise serious doubts about the validity of extrapolating conclusions based on the former to explain the latter.

On the other hand, the few empirical studies purporting to test strategic explanations for panel effects have produced mixed results. Hettinger et al. found no empirical support for the theory that court of appeals judges dissent strategically in order to signal the need for further review to either the circuit en banc or the Supreme Court.⁷¹ By contrast, Steven Van Winkle reports that federal appellate judges are more likely to dissent when their preferences are more closely aligned with the circuit majority, offering support for a signaling theory. Similarly, Cross and Tiller claim to find empirical support for their whistleblower theory.⁷²

⁶⁸ The probability that a court of appeals decision will be reviewed by the Supreme Court and the probability of review by the circuit en banc are quite small, both events occurring in less than 1% of cases. See Kim, *supra* note 11, at 391, n. 30 (estimating that the chance that a given court of appeals decision will be reviewed by the Supreme Court is approximately 0.14%); Ginsburg & Falk, *supra* note 4, at 1045, tbl. 2 (reporting that 1.03% of argued cases were reheard en banc and 0.2% of non-argued cases were reheard en banc by the D. C. Circuit from 1981 to 1990); Solimine, *supra* note 62, at 46 tbl. 2 (reporting that less than 1% of court of appeals cases were heard en banc in the 1980s).

⁶⁹ See, e.g., Edwards, *Effects of Collegiality*, *supra* note 3; Edwards, *Collegiality and Decision Making*, *supra* note 42; Wald, *supra* note 56.

⁷⁰ See SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 67-76, and sources cited therein.

⁷¹ HETTINGER ET AL., *supra* note 21, at 84.

⁷² Cross & Tiller, *supra* note 10, at 2172.

These mixed results undoubtedly result in part from the different methods used to test for strategic effects. For example, the Van Winkle and Cross-Tiller studies examined cases in specific issue areas—search and seizure law and judicial review of agency actions, respectively—that are acknowledged to be politically contested, while Hettinger et al. used a sample drawn from all court of appeals cases in a given time period, regardless of issue. If strategic behavior is more prominent in highly political as compared with run-of-the-mill cases, these differences in sample selection might account for the divergent results.⁷³

Other modeling choices limit the usefulness of these studies in explaining panel effects. Hettinger et al. narrowly focus on the decision to dissent, and their model does not take into account panel effects more generally. They begin with the assumption that the opinion in a case reflects the preferences of the majority opinion writer, then examine the decision of each of the other two judges to dissent or not, using variables that capture the preferences of the Supreme Court and the circuit en banc relative to the appellate judge.⁷⁴ This approach has the advantage of offering a direct test of the theory that appellate judges' dissenting behavior is influenced by the possibility and likely outcome of further review. However, the model overlooks the interactions between judges in reaching a decision. More plausibly, a majority opinion will reflect the preferences of the two judges needed to agree on the outcome, and the third judge then faces the decision whether to go along with the majority or to dissent. By including data on *both* non-authoring judges to model the decision to dissent, the approach of Hettinger et al. may underestimate the degree to which strategic behavior occurs.

Cross and Tiller's empirical study, on the other hand, does not take into account the preferences of the reviewing courts, which are crucial to their whistleblower theory. Analyzing D.C. Circuit decisions involving judicial review of agency actions, they show that ideologically mixed panels are far more likely to defer to agency decisions than ideologically unified panels.⁷⁵ Assuming that deference indicates obedience to doctrine, they argue that this finding supports their theory. The assumption that a decision not to defer to an agency equates with "disobedience" of doctrine is highly contestable.⁷⁶ But

⁷³ The cases analyzed by Hettinger et al. are not entirely without political content, however. They report that "ideological disagreement" between the majority opinion writer and a potential dissenter—i.e., the distance between their ideology scores—*does* appear to influence the likelihood of dissent, even while the preferences of the Supreme Court or the circuit en banc do not. HETTINGER ET AL., *supra* note 21, at 84.

⁷⁴ *Id.* at 78-80.

⁷⁵ Cross & Tiller, *supra* note 10, at 2172.

⁷⁶ The relevant doctrine was laid out by the Supreme Court in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). Cross and Tiller assume that "obeying doctrine" requires deference to an agency's policy, and that a failure to defer constitutes "disobedience." However, *Chevron* does not require deference when the agency interpretation is contrary to the statute or the agency's interpretation is "unreasonable." Depending upon the circumstances, a decision *not* to defer in a particular case might be considered "obedient to doctrine" rather than the opposite. Thus, without including case-specific information, the assumption that a decision overturning an agency action is equivalent to

the critical weakness of their empirical test is their failure to incorporate the reviewing court's preferences. According to their theory, by "threaten[ing] to highlight the disobedience externally to a higher court or to Congress," the minority panel member induces the majority to conform to the law.⁷⁷ However, this threat of "exposure and possible reversal" will only be effective if in fact the higher court or Congress is likely to agree with the minority judge that the majority is being "disobedient." In other words, if a "whistleblower" effect actually causes panel effects, then panel effects should depend upon the location of the reviewing court's preferences relative to those of the minority judge.

Cross and Tiller do not systematically examine the relationship between the preferences of the minority judge and the Supreme Court. They report that mixed panels were more likely to defer to the agency (in their parlance, "obey doctrine") in the presence of a "whistleblower," but their results treat Democratic-majority and Republican-majority panels alike even though the Supreme Court was dominated by Republican nominees during the entire time period of their study (1991-1995). If "whistleblowing" works to "highlight [] disobedience externally to a higher court,"⁷⁸ then in an era with a conservative Supreme Court, the threat of whistleblowing should be most effective when a Republican minority judge threatens to expose a Democratic majority rather than the reverse situation. Cross and Tiller's data, however, suggest that the opposite is true—they found that majority Democratic panels were "if anything, more partisan than Republican panels."⁷⁹ At the same time, with a majority Republican Supreme Court, one would not expect a threat of dissent by a lone Democratic appointee to have much influence, and yet they found that "[t]he presence of a single Democrat on a panel appears to have had a distinct moderating effect on the two Republicans."⁸⁰ Thus, to the extent that Cross and Tiller examine the preferences of the Supreme Court relative to those of the panel members, their findings seem to undermine their strategic explanation for panel effects.

B. *Constructing An Empirical Test*

In this Part, I formalize the intuitions underlying a strategic account of panel decision-making in order to generate predictions that can be tested against the data. Before I do so, several caveats are in order. First, in order to make the analysis tractable, a number of simplifying assumptions are necessary. Consistent with a large and growing

"disobedience to doctrine" is unwarranted. Judge Edwards has similarly criticized Cross and Tiller's assumption about what constitutes "obedience" to doctrine, arguing that their study "fundamentally misunderstands the meaning of *Chevron* in a way that is fatal to the entire hypothesis." Edwards, *Collegiality and Decision Making*, *supra* note 42, at 1356.

⁷⁷ Cross & Tiller, *supra* note 10, at 2159.

⁷⁸ *Id.*

⁷⁹ *Id.* at 2174.

⁸⁰ *Id.* at 2173.

empirical literature on judicial decision-making, I assume that judges—including the federal court of appeals judges studied here—are motivated by their ideology or policy preferences.⁸¹ In using these terms, I do not mean to suggest that judges disregard the law. In fact, considerable evidence indicates that law and legal doctrine constrain and shape the decisions of lower federal court judges.⁸² Nor do I mean to suggest that there is necessarily anything illegitimate about a judge’s pursuit of policy goals. Legal doctrine can never be fully determinate and judges are often called upon to exercise judgment in deciding cases.⁸³ In those areas where the law “runs out,” judges’ attention to the policy consequences of a decision is not only inevitable, but arguably quite appropriate.

Although the model assumes that judges act strategically in pursuing their policy goals, I avoid Cross and Tiller’s “whistleblower” terminology because it suggests normative judgments about judicial motivation that are not empirically supported and are unnecessarily tendentious. A “whistleblower” brings attention to otherwise covert wrongdoing, and thus, Cross and Tiller suggest that politically motivated judges pursue their “partisan ambitions”⁸⁴ by engaging in “manipulation or disregard of the applicable legal doctrine,”⁸⁵ and that the minority member “acts as a whistleblower, ready to expose any cheating by the majority.”⁸⁶ This account implies that legal doctrine provides clearly correct outcomes such that departures from doctrine can be easily identified, and that judges deliberately disregard the law. Neither assumption is justified,⁸⁷ nor is either necessary to a strategic theory of judicial decision-making. Thus, I reject the

⁸¹ While the assumption that judges are motivated by ideology has become commonplace, what scholars mean when they refer to “judicial ideology” is quite ambiguous. See Joshua B. Fischman & David S. Law, *What Is Judicial Ideology, and How Do We Measure It?* (2008) (forthcoming WASH. U. J. OF LAW & POL’Y); Brian D. Lammon, *What We Talk About When We Talk About Ideology: Judicial Politics Scholarship and Naïve Legal Realism* (2008) (unpublished manuscript).

⁸² See, e.g., John Gruhl, *The Supreme Court’s Impact on the Law of Libel: Compliance by Lower Federal Courts*, 33 W. POL. Q. 502 (1980) (finding lower courts overwhelmingly comply with Supreme Court decision in area of libel law); Charles A. Johnson, *Law, Politics, and Judicial Decision Making: Lower Federal Court Uses of Supreme Court Decisions*, 21 LAW & SOC’Y REV. 325 (1987) (testing legal model of lower court decision-making); Donald R. Songer, *The Impact of the Supreme Court on Trends in Economic Policy Making in the United States Court of Appeals*, 49 J. POL. 830 (1987) (finding Supreme Court decisions in labor and antitrust areas had significant impact on decisional trends in courts of appeals); Songer & Sheehan, *supra* note 10 (finding nearly universal compliance in courts of appeals with two significant Supreme Court decisions).

⁸³ Kim, *supra* note 11.

⁸⁴ Cross & Tiller, *supra* note 10, at 2175.

⁸⁵ *Id.* at 2156.

⁸⁶ *Id.* at 2175.

⁸⁷ Legal commands are often open-ended, requiring the exercise of discretion. Because of this open-endedness, a pattern of judicial votes correlating with political preferences does not necessarily indicate disregard of the law. Kim, *supra* note 11, at 417.

“whistleblowing” story and ask instead whether judges act strategically in the sense that they are influenced by the broader institutional context and not solely by conditions internal to the panel deciding a particular case.

Also consistent with prior literature, I limit my focus to judicial votes. Of course, judges do much more than simply decide cases for plaintiffs or defendants. The reasons they give to justify their decisions are critical, for it is the content of opinions rather than the simple declaration of a winner that shapes the development of the law. Particularly when studying panel effects, one risks missing a great deal by focusing only on votes. Panelists undoubtedly deliberate not only over which party should win, but for what reasons. They may bargain about how broadly or narrowly a decision will be written, or how to frame the relevant doctrinal rule. Thus, a minority panelist who joins a majority opinion may have influenced the reasoning or reach of the opinion even though the simple outcome appears unaffected. These more subtle forms of influence are difficult to detect and measure reliably and, therefore, I focus here only on judicial votes. By studying only *votes*, this empirical test captures only the clearest form of influence—that is, situations in which a panel member actually changes the direction of their decision.⁸⁸

Finally, for purposes of this empirical test, I adopt the common convention of defining panel alignments in terms of partisan affiliation. When all three judges on an appellate panel were appointed by a President of the same party, the panel is considered “unified” or “homogeneous,” even though the individual judges on that panel likely hold a range of views. Similarly, a “mixed panel” is one which includes judges appointed by both Republican and Democratic presidents, and the majority or minority status of any given judge depends upon the identity of the other panel members. Thus, if a court of appeals judge appointed by President Clinton is sitting with two judges appointed by President H.W. Bush, she is the “minority” judge on that case, while the two Bush appointees are the “majority” judges. That same Clinton appointee might sit in another case with a Carter appointee and a Reagan appointee, and for purposes of that case, she is a “majority” judge. Unified panels (with three Democratic appointees or three Republican appointees) do not have “majority” or “minority” judges.

With these caveats aside, I consider the empirical implications of a strategic model. Because such a model takes into account the broader institutional context, the preferences of the reviewing court should be an important factor in predicting when panel effects occur. Consider the position of a judge who is in the political minority on a panel. The other two judges are likely to vote in a manner inconsistent with her preferred outcome. She thus faces a choice: she can vote her sincere preference, which would entail writing a dissenting opinion, or she can go along with the majority opinion. If she acts strategically, she will decide between these two courses of action by considering whether dissenting is likely to provoke further review and result in a final outcome closer to her preferences, or whether it will be a futile act that will not affect the ultimate resolution of the case. And whether or not a dissent is likely to produce a result more to her liking will in turn depend upon the preferences of the reviewing court. The more

⁸⁸ As Farhang and Wawro argue, looking only at changes in voting behavior thus constitutes “a very conservative test” of panel effects. Farhang & Wawro, *supra* note 12, at 313.

closely aligned the preferences of the minority judge and the reviewing court, the more likely it is that the reviewing court will view her dissent as a signal that the majority decision should be reviewed, and the more likely that the minority judge will prefer the reviewing court's resolution of the case to that of the panel majority. In such a situation, the minority judge would have an enhanced incentive to dissent.

An analysis focused solely on the dissenting behavior of the minority judge is seriously incomplete, however, for if the strategic account is correct, the *threat* of dissent may induce the panel majority to change its decision in some instances, thereby making actual dissent unnecessary. Consider, for example, a case in which two of the panel members are Democratic appointees and agree on a particular outcome, such as a decision in favor of a plaintiff in an employment discrimination case. The minority judge, a Republican appointee, expresses her disagreement with the proposed outcome, and indicates that she will file a dissent explaining why she believes the majority opinion to be wrong. If the majority judges perceive that the reviewing court is likely to agree with the minority judge, they might choose to modify their opinion, either moderating their reasoning sufficiently to entice the minority judge to join or changing the outcome altogether and deciding in favor of the employer in order to avoid a dissent and the increased risk that their decision will be reversed.⁸⁹ On the other hand, if the minority judge's preference is further from the reviewing court's than from the majority's, the minority judge is less likely to dissent, and if she does so, her dissent is less likely to signal the need for review. Knowing this, the majority will be less likely to accommodate the minority judge, or to moderate their own views. Thus, the strategic account predicts that *both* the decision of a minority judge to dissent and the willingness of the majority to accommodate the minority depend upon the preferences of the reviewing court.

Because strategic effects might be observed *either* when a minority judge chooses to dissent *or* when a majority judge changes his vote, it is important to capture both possibilities when empirically testing for panel effects.⁹⁰ At one extreme, if the threat of dissent were wholly effective, dissent rates by minority judges would be no higher under conditions in which they had an enhanced incentive to dissent than otherwise. Instead, one would observe only an increased willingness on the part of majority judges to decide

⁸⁹ Cross and Tiller, consistently with much of the positive political theory literature on the judicial hierarchy, argue that the fear of "exposure and possible reversal" may induce the majority to follow doctrine. Cross & Tiller, *supra* note 10, at 2159, 2173. Implicit in this argument is the assumption that reversal by a higher court inflicts greater costs on the lower court judge than simply the loss of her preferred outcome. See Kim, *supra* note 11, at 401. If this were not the case, the rational policy-seeking judge would prefer a risk that her favored outcome will be overturned to the certainty that the case will be decided according to the reviewing court's preferences and not her own. There are reasons to be skeptical of this explanation, see *id.* at 402-04; however, it is also possible that a judge who otherwise anticipates reversal may prefer to accommodate the minority judge regarding the outcome – who wins – in order to retain some control over the rationale articulated in the case.

⁹⁰ In their test of a strategic model, Hettinger et al. focus only on the decision to dissent, not on any change in the voting behavior of majority judges. See HETTINGER ET AL, *supra* note 21. Quite possibly, they found no evidence of strategic behavior because they examined only one aspect of the potential strategic interaction among appellate panelists.

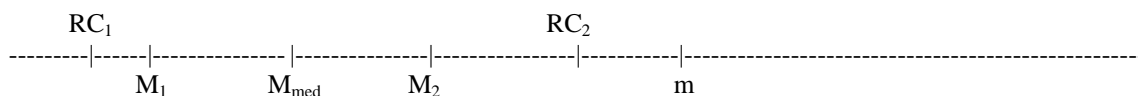
cases in accordance with the preferences of the minority judge in those situations. More realistically, if the strategic account is correct, minority judges will sometimes be encouraged to dissent and majority judges will sometimes be induced to moderate or modify their opinions when the conditions creating an enhanced incentive to dissent exist (i.e. the minority judge is more closely aligned with the reviewing court than with the panel majority). Thus, understanding panel effects requires examination of the voting patterns of *both* the panel minority and majority.

In order to capture the behavior of both minority and majority judges on mixed panels, I do not analyze the ideological direction of a judge’s vote (liberal or conservative) as in past studies, but whether a judge’s vote is *counter-ideological*. In focusing on “counter-ideological votes,” I do not mean to imply that judges’ other votes are ideological in the sense of being driven or solely motivated by ideology. Rather, “counter-ideological” is simply shorthand for identifying votes in a direction opposite to what would be predicted by a naïve ideological model. If judges simply voted ideologically, then Democratic-appointed judges would always vote liberally and Republican-appointed judges always conservatively. They do not do so, of course, because many factors beyond policy goals or political preferences influence their decisions. At the same time, there is an observed correlation between partisan affiliation and voting, and that correlation is muted when Democratic- and Republican-appointed judges sit together. Panel effects, then, are simply the increased tendency for judges to vote “counter-ideologically” when sitting with judges affiliated with the other party. Examining the conditions under which appellate judges vote counter-ideologically thus offers a way to test whether the preferences of the reviewing court influence panel effects.

I use a traditional spatial model to identify the situations in which the minority judge is more closely aligned with the reviewing court than with the panel majority, and therefore, would have an enhanced incentive to dissent according to the strategic account. Following conventions in the judicial politics literature, I assume judges have an “ideal point” which represents their preferred outcome in a given case in some ideological space usually characterized along a liberal-conservative dimension. Under a strategic model, judges vote in a manner that will maximize their preferences by producing an outcome as close as possible to their ideal point, taking into account the likely response of other actors in the system.

Consider a situation in which the preferences of the panel minority and majority members are arrayed as follows:

Figure 1:



The two majority members (M_1 and M_2) will agree on an outcome at “ M_{med} ,” the median of their respective preferences. The minority judge (m) faces a choice of dissenting or joining the majority opinion.⁹¹ If she joins the majority opinion, the outcome represents a loss to the extent that the majority opinion at “ M_{med} ” departs from her preferred outcome at “ m ”. If she dissents, her dissent may serve as a signal, increasing the probability that the majority’s decision will be reviewed, either by the Supreme Court or the circuit en banc. If the reviewing court’s preferences fall at RC_1 , the minority judge will be *worse* off than if the majority opinion were never reviewed, given that RC_1 is more distant from “ m ” than “ M_{med} ”. On the other hand, if the reviewing court’s preference falls at RC_2 , the minority judge will prefer the outcome reached by the reviewing court to that of the panel majority, and will have an enhanced incentive to dissent under these circumstances. Thus, according to the strategic account, the minority judge should be more likely to dissent when the reviewing court’s preference is located at RC_2 than at RC_1 . More generally, the minority judge should have an enhanced incentive to dissent whenever her preferences fall closer to the reviewing court’s than to those of the panel majority. Knowing this, and seeking to avoid review and reversal, the panel majority should be more likely to accommodate the minority member under these circumstances as well.

Thus, if the strategic account is correct, the propensity of any given judge to vote counter-ideologically will be influenced not only by the preferences of the other two judges on a panel, but also by where the preferences of the reviewing court fall in relation to the panel’s preferences. The diagram below identifies graphically the situations in which the minority judge has an enhanced incentive to dissent (and the majority, a corresponding incentive to accommodate). If the preference of the reviewing court falls in the shaded area B, it will be closer to the minority judge’s preference than the panel majority’s is, and therefore, the minority judge will prefer the outcome that would be chosen by the reviewing court to the majority’s resolution of the case. This area is bounded by M_{med} (the median of the ideal points of the two majority judges) and M'_{med} (where the distance from m to M'_{med} is equal to the distance from M_{med} to m).

Figure 2:

RC:

A	B	C
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-----|-----|-----|-----|-----

⁹¹ In reality, the minority judge does not face such a simple binary choice, because there is always the possibility that she can bargain with the majority to try to achieve a decision that falls somewhere between M_{med} and m . Assuming that the majority and the minority disagree on which party should win – and not just the rationale – the observable outcomes remain the same: either the minority judge dissents or she joins the majority. It may be the case that the minority judge joins the majority because they have moderated the reasoning in their opinion even though the outcome appears unchanged. It is also possible that the majority and minority judges never disagreed on the outcome, but only on the appropriate rationale, such that the minority judge must choose between joining the majority opinion or concurring separately. As discussed *supra*, the focus here on judicial *votes* means that the empirical test will not detect these more subtle forms of panel influence, but will only capture the strongest form of interaction – a change in voting behavior.

M_{med} m M'_{med}

Expressed mathematically, the minority judge is more closely aligned with the reviewing court and will therefore have an enhanced incentive to dissent whenever

$$|RC - m| < |M_{med} - m|$$

Combining panel composition and the relative preferences of the reviewing court produces five different voting conditions (depicted in Figure 3) that may influence appellate voting. Simple panel effects predict that majority judges on mixed panels (conditions 2 and 4) will be more likely to vote counter-ideologically than judges on unified panels (condition 1), and that minority judges on mixed panels (conditions 3 and 5) will be more likely to vote counter-ideologically than majority judges on mixed panels (conditions 2 and 4). Considering strategic effects suggests another set of predictions: When the minority judge is aligned with the reviewing court (condition 5), the minority judge will be *more* likely to vote her true preferences and dissent, and therefore *less* likely to vote counter-ideologically than when her preferences are not so aligned (condition 3). For a majority judge the reverse should be true. She will be *more* likely to vote counter-ideologically when the minority is aligned with the reviewing court (condition 4) in order to avoid the risk of review and reversal than otherwise (condition 2).

Figure 3: Cells illustrate 5 situations in which incentives of judge on three-judge panel are hypothesized to vary.

	Unified Panel	Mixed Panel	
		Majority Judge	Minority judge
minority judge and reviewing court <u>not</u> aligned	1	2	3
minority judge and reviewing <u>are</u> court aligned		4	5

C. Data and Empirical Analysis

In order to test the strategic account of panel effects, I use appellate voting data in employment discrimination cases alleging sex discrimination under Title VII of the Civil Rights Act of 1964.⁹² These data are analyzed to determine whether panel effects differ depending upon the preferences of the Supreme Court or the circuit as a whole. The data comprise 2361 judicial votes from 787 cases involving allegations of sex discrimination in employment, including sexual harassment cases, decided by three judge panels of the federal courts of appeals from 1995 and 2002 inclusive. The data include a mix of cases decided by panels of different composition, as seen in Table 1, *supra*.

As in most prior studies documenting panel effects, the data analyzed here is limited to published opinions.⁹³ One might justify such a limitation on the grounds that unpublished opinions are simple and straightforward and do not involve difficult or complex issues of law.⁹⁴ In fact, however, scholars have found that a significant percentage of unpublished opinions are “substantively significant,”⁹⁵ that ideological voting is observed in unpublished as well as published decisions,⁹⁶ and that a significant number of opinions reversing the lower court are never published.⁹⁷ Other work has shown that the criteria for publication and the level of specificity of those criteria vary widely from circuit to circuit and that publication rates differ significantly depending

⁹² The data used here were originally collected by Sunstein and his colleagues, and formed the basis for their conclusions about ideological voting and panel effects in sex discrimination cases. See Sunstein et al., *Ideological Voting*, *supra* note 10, at 319-20. As they report, these data were collected by searching Lexis for “sex! discrimination or sex! harassment” for the time period from 01/01/95 through 12/31/02. *Id.* at 312, n. 29. The search results were filtered to exclude cases that did not actually involve sex discrimination cases, *id.* at 311, n. 20, resulting in a dataset of 1007 cases. *Id.* at 312, n. 29. Boyd et al. culled the dataset to include only those cases involving claims under Title VII of the Civil Rights Act of 1964 in order to control for the basis of suit and added information about the judges, including their JCS scores, resulting in a data set of 787 cases. See Boyd et al., *supra* note 12, App. B. This revised dataset, created by Boyd et al., is the basis for the empirical analysis in this article.

⁹³ See e.g., SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 18; Sunstein et al., *Ideological Voting*, *supra* note 10, at 313; Miles & Sunstein, *supra* note 12, at 825; Farhang & Wawro, *supra* note 12, at 310-11.

⁹⁴ See, e.g., SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 18.

⁹⁵ Pamela Foa, *A Snake in the Path of the Law: The Seventh Circuit’s Non-Publication Rule*, 39 U. PITT. L. REV. 309 (1977).

⁹⁶ See, e.g., Donald R. Songer, *Criteria for Publication of Opinions in the U.S. Courts of Appeals: Formal Rules Versus Empirical Reality*, 73 JUDICATURE 307 (1990); Law, *supra* note 12; Deborah Jones Merritt & James J. Brudney, *Stalking Secret Law: What Predicts Publication in the United States Courts of Appeals*, 54 VAND. L. REV. 71 (2001).

⁹⁷ See William L. Reynolds & William M. Richman, *An Evaluation of Limited Publication in the United States Courts of Appeals: The Price of Reform*, 48 U. CHI. L. REV. 573 (1981).

upon the circuit and the authoring judge.⁹⁸ Most relevant here, panel effects have been documented in unpublished as well as published cases.⁹⁹

Omitting unpublished opinions raises the concern that the decision whether or not to publish is itself subject to strategic calculation, and therefore, that panel effects may differ between published and unpublished opinions.¹⁰⁰ One might speculate, for example, that strategic judges seek “to publish decisions that they support on ideological grounds, and to leave unpublished cases in which they find themselves compelled to reach ideologically undesirable results.”¹⁰¹ Because minority judges may threaten to dissent in order to engage the majority in bargaining, David Law hypothesizes that ideologically mixed panels might be less likely to publish than homogeneous panels.¹⁰² However, in his study of Ninth Circuit decisions in asylum cases, he found no significant evidence that panel homogeneity affects the publication decision.¹⁰³ Similarly, Merritt and Brudney concluded in an earlier study of labor law cases that no difference in publication rates existed between unified and mixed panels.¹⁰⁴ Thus, although the omission of unpublished opinions is a limitation of this study and cautions against over-generalizing its results, earlier work offers some reassurance that panel effects can be meaningfully studied using only published opinions.

For the reasons explained above, I use “counter-ideological vote” as a way of measuring panel effects. In order to test the influence of the reviewing court’s preferences on observed panel effects, I use a logit model with “counter-ideological vote” as the dependent variable. “Counter-ideological vote” is coded 1 if a judge voted in the opposite direction from that predicted by her party affiliation under a naïve voting model (e.g. a Democrat votes conservatively) and 0 if she voted consistently with her party affiliation (e.g. a Republican votes conservatively). Because all of the cases in the dataset involve claims of sex discrimination, I assume that a vote in favor of the plaintiff is “liberal” and a vote in favor of the defendant is “conservative.” Dummy variables capture the five voting conditions illustrated in Figure 3, *supra*. I omit the variable for unified panels and include dummy variables for each of the other four conditions of

⁹⁸ See Law, *supra* note 12, at 823-24 and sources cited therein.

⁹⁹ *Id.* at 848.

¹⁰⁰ Based on her experiences as a court of appeals judge, Judge Patricia Wald reports that judges on a panel may “occasionally compromise ... on an unpublished, nonprecedential judgment/memorandum rather than a published opinion.” Wald, *supra* note 56, at 253-54.

¹⁰¹ Law, *supra* note 12, at 838.

¹⁰² *Id.* at 839.

¹⁰³ *Id.* at 861-62.

¹⁰⁴ Merritt & Brudney, *supra* note 96, at 829.

interest—a majority judge voting when the minority judge is not aligned with the reviewing court (condition 2); a majority judge voting when the minority judge is so aligned (condition 4); and a minority judge voting when not aligned (condition 3) and aligned (condition 5) with the reviewing court.

In order to capture the relative preferences of the judges as well as the reviewing court, I use Judicial Common Space scores (“JCS scores”).¹⁰⁵ Rather than treating all judges affiliated with a given political party alike, JCS scores take into account the norm of senatorial courtesy, using information about an appointee’s home-state senators as well as the nominating President to assign scores.¹⁰⁶ The result is a set of ideology scores for court of appeals judges that reflect differences in ideology between different presidents of the same party and the Senate’s role in the judicial selection process. Preferences of the Supreme Court Justices are included by transforming the Martin-Quinn scores,¹⁰⁷ which estimate the ideal points of Supreme Court Justices based on judicial votes, onto the Common Space scale.¹⁰⁸ Thus, JCS scores offer estimates of the ideology scores or ideal points of all federal court of appeals judges and U.S. Supreme Court Justices on a common scale.

Consistent with prior literature, I use the party of the appointing President to determine whether a panel is “unified” or “mixed” and, on a mixed panel, to identify the majority and minority judges. Once the majority or minority status of judges on mixed panels has been determined, the JCS scores are then used to calculate the distance between the preferences of the minority judge and the panel majority (defined as the

¹⁰⁵ JCS scores are intended to provide a “reliable and valid measurement strategy for placing judges of lower courts and justices of higher courts in the same policy space.” Lee Epstein, Andrew D. Martin, Jeffrey A. Segal & Chad Westerland, *The Judicial Common Space*, 23 J. L. ECON. & ORG. 303, 305 (2007). The JCS scores build on NOMINATE Common Space scores developed by Keith Poole to estimate ideology scores for Representatives, Senators and Presidents in a two-dimensional issue space. *See id.* at 4; HETTINGER ET AL., *supra* note 21, at 50; Keith T. Poole, *Recovering a Basic Space from a Set of Issue Scales*, 42 AM. J. OF POL. SCI. 954 (1998).

¹⁰⁶ Giles, Hettinger and Peppers developed a method for estimating ideology scores for lower federal court judges that takes into account the norm of senatorial courtesy—that is, the tradition that “presidents consult with senators who share their partisan affiliation and who represent the state in which the vacancy has arisen.” HETTINGER ET AL., *supra* note 21, at 50. The basic strategy is to “assign each judge appointed to the circuit bench in the absence of senatorial courtesy the Poole ideology score corresponding to his or her appointing president. However, for those judges appointed when there was one home-state senator of the president’s party, Giles, Hettinger, and Peppers give those judges the Poole ideology score corresponding to that home-state senator. When both home-state senators were of the president’s party, the corresponding ideology score for the judge is equal to the average Poole score of the two senators.” *Id.* at 50-51.

¹⁰⁷ *See* Andrew D. Martin & Kevin M. Quinn, *Dynamic Ideal Point Estimation via Markov Chain Monte Carlo for the U.S. Supreme Court, 1953-1999*, 10 POL. ANALYSIS 134 (2002).

¹⁰⁸ Epstein et al., *supra* note 105, at 310.

midpoint between the JCS scores of the two majority members) and the distance between the preferences of the minority judge and the reviewing court. Those distances are then used to determine whether the preferences of the minority judge are more closely aligned with the reviewing court than with the panel majority (conditions 4 and 5), or whether they are not so aligned (conditions 2 and 3).¹⁰⁹

Because the reviewing court might appropriately be viewed as either the Supreme Court or the circuit en banc, I test for the effects of each in separate estimations. The Supreme Court's preference is set at the JCS score of the median Justice. The preferences of circuit courts en banc are measured by the JCS score of the median judge on that circuit.

Both gender and party serve as important control variables. Plaintiffs lose more often than they win in employment discrimination cases,¹¹⁰ and therefore, Democratic appointees may appear to vote counter-ideologically more often than Republican judges when they are merely voting consistently with the overall trend in these cases. Because I want to isolate the effects of panel composition on counter-ideological voting, the judge's party affiliation must be taken into account. The gender of the judge is also potentially significant, given that the votes studied here occurred in sex discrimination cases. A number of studies have found that female court of appeals judges are more likely to vote in favor of plaintiffs in sex discrimination suits.¹¹¹ However, because the dependent variable here is "counter-ideological vote," the effect of gender will depend upon party affiliation. Democratic female judges may be *less* likely to vote counter-ideologically, all else equal, given that a counter-ideological vote will favor the defendant in a sex discrimination case. Conversely, Republican female judges may be *more* likely to vote counter-ideologically, all else equal, given that a counter-ideological vote for them will favor the plaintiff. In order to take these effects into account, I include dummy variables to capture the gender and party affiliation of the judge.

¹⁰⁹ Recall that in this model, a minority judge is "aligned" with the reviewing court, and therefore has an enhanced incentive to dissent, whenever $|RC - m| < |M_{med} - m|$.

¹¹⁰ See Kevin M. Clermont, Theodore Eisenberg & Stewart J. Schwab, *How Employment-Discrimination Plaintiffs Fare in the Federal Courts of Appeals*, 7 EMPLOYEE RTS. & EMP. POL'Y J. 547 (2003).

¹¹¹ See, e.g., Boyd et al., *supra* note 12; Nancy Crowe, *The Effects of Judges' Sex and Race on Judicial Decisionmaking on the U.S. Courts of Appeals, 1981-1996* (1999) (unpublished manuscript); Sue Davis, Susan Haire & Donald R. Songer, *Voting Behaviour and Gender on the U.S. Courts of Appeals*, 77 JUDICATURE 129 (1993); Farhang & Wawro, *supra* note 12; Peresie, *supra* note 12; *Contra* Sarah Westergren, *Gender Effects in the Courts of Appeals Revisited: The Data Since 1994*, 92 GEORGETOWN L.J. 689 (2004).

Prior literature also suggests the importance of controlling for the direction of the decision below. It is well documented that courts of appeals are far more likely to affirm than reverse the decisions of district court judges.¹¹² If a counter-ideological vote requires reversing a lower court, one might expect that it will be less likely to occur than if the counter-ideological vote involves an affirmance. I control for this affirmance effect by including a variable to capture whether the appellate judge would be required to reverse the decision below in order to vote counter-ideologically (coded 1 when the lower court decision was conservative and the judge is Republican or when the lower court decision was liberal and the judge is Democratic; 0 otherwise).

In addition, a variable was added for ideological extremity on the theory that judges with ideal points farther from the center are more likely to be ideological in the colloquial sense of rigidly pursuing their policy goals and being less willing to compromise with their co-panelists and vote in a counter-ideological direction. JCS scores range from -1 to 1, and therefore, I measure ideological extremity as the absolute value of a judge's JCS score. In other words, the more distant the judge's score from zero, whether in a positive or negative direction, the more ideologically extreme she is assumed to be.

Table 3 briefly summarizes the variables used in the model and provides summary statistics of the data.

¹¹² See Chris Guthrie & Tracey E. George, *The Futility of Appeal: Disciplinary Insights into the "Affirmance Effect" on the United States Courts of Appeals*, 32 FLA. ST. U. L. REV. 357, 358 (2005) (reporting that federal courts of appeals affirmed 90% of the cases decided in recent decade).

Table 3. Model Variables and Basic Descriptive Statistics for Votes of Federal Court of Appeals Judges in Sex Discrimination Cases, 1995-2002.

Variable	No. observations (% of total sample)
Counter-ideological vote	932 (39.5%)
Condition 1—Vote on Unified Panel	702 (29.7%)
Condition 2—Majority Judge Vote when Minority Judge and Circuit Not Aligned	176 (7.4%)
Condition 3—Minority Judge Vote when Minority Judge and Circuit Not Aligned	88 (3.7%)
Condition 4—Majority Judge Vote when Minority Judge and Circuit Aligned	930 (39.4%)
Condition 5—Minority Judge Vote when Minority Judge and Circuit Aligned	465 (19.7%)
Condition 2—Majority Judge Vote when Minority Judge and Supreme Ct. Not Aligned	60 (2.5%)
Condition 3—Minority Judge Vote when Minority Judge and Supreme Ct. Not Aligned	30 (1.3%)
Condition 4—Majority Judge Vote when Minority Judge and Supreme Ct. Aligned	1046 (44.3%)
Condition 5—Minority Judge Vote when Minority Judge and Supreme Ct. Aligned	523 (22.2%)
Republican male judge	1356 (57.4%)
Republican female judge	109 (4.62%)
Democratic male judge	671 (28.4%)
Democratic female judge	225 (9.5%)
Reversal required for counter-ideological vote	1314 (55.6%)

Ideological Extremity

VALUES: Min = .003
 Mean = .326
 Max = .791

Prior studies of panel effects have included a variable to capture circuit fixed effects.¹¹³ This is important for models which use “ideological direction of vote” as the dependent variable, because circuits vary considerably in their liberal or conservative orientation, and therefore, the baseline propensity to vote in a liberal or conservative direction differs significantly. When using “counter-ideological votes” as the dependent variable, however, the theoretical case for including circuit fixed effects is much less certain. One might hypothesize that circuit cultures vary in terms of the emphasis placed on consensus, but the impact of these differences on counter-ideological voting is somewhat ambiguous, given that either the minority or majority judges might accommodate the opposing viewpoint. If it is true that circuit culture varies in this way, then the behavior of judges in each of the relevant voting conditions depicted in Figure 1 might differ depending upon the circuit. In other words, the theoretical argument for controlling for circuit would require that the model include not only circuit fixed effects, but also variables to capture the interaction between circuit and each of the different voting conditions, rendering the model unmanageably large. Thus, the results and discussion here rely on models that exclude circuit fixed effects. In the Appendix, I report the results when simple circuit fixed effects are included in the model. The basic substantive results are quite similar.

III. RESULTS

A. *The Supreme Court as Reviewing Court*

Table 4 presents the results of the logistic regression for counter-ideological votes, treating the Supreme Court as the reviewing court.¹¹⁴ Examining the control variables reveals that only the variable for reversal is statistically significant. As predicted, whether a vote will entail reversing the lower court has a strong impact, significantly reducing the likelihood of a counter-ideological vote. The control variables for judge gender and party affiliation, and for ideological extremity are not statistically significant.

¹¹³ See, e.g., Farhang & Wawro, *supra* note 12, at 315; Sunstein et al., *Ideological Voting*, *supra* note 10, at 354, Appendix; SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 151, Appendix.

¹¹⁴ Each observation in the data analyzed here consists of an individual judge vote in a case. Because these votes were cast with judges sitting in panels of three, an assumption that each observation is independent is not warranted. In order to account for the possibility that some votes are correlated, I calculated robust standard errors clustered on each case.

Table 4. Logistic Regression Model of Counter-Ideological Votes with Supreme Court as Reviewing Court

	Coefficient	Robust Standard Error	P> z
Condition 1—Vote on Unified Panel (omitted baseline variable)			
Condition 2—Majority Judge Vote when Minority Judge and Sup. Ct. Not Aligned	1.216*	0.405	0.003
Condition 4—Majority Judge Vote when Minority Judge and Sup. Ct. Aligned	0.700*	0.177	0.000
Condition 3—Minority Judge Vote when Minority Judge and Sup. Ct. Not Aligned	0.822*	0.412	0.046
Condition 5—Minority Judge Vote when Minority Judge and Sup. Ct. Aligned	1.171*	0.184	0.000
Republican male (omitted baseline variable)			
Republican female	0.236	0.230	0.303
Democratic female	-0.312	0.204	0.126
Democratic male	-0.124	0.175	0.480
Ideological extremity	-0.359	0.320	0.261
Reversal required	-1.234*	0.164	0.000
Constant	-0.237	0.215	0.270

Number of observations = 2361
 Log pseudolikelihood = -1441.1935
 Pseudo R2 = 0.0901

Proportional Reduction in Error = 18.99%
 Bayesian Information Criterion = 2960.055

The statistics reported for the various voting conditions are relatively uninteresting in this form. The fact that the coefficients for conditions 2 through 5 are all positive and statistically significant indicates that judges sitting on mixed panels are more likely to vote counter-ideologically than judges on unified panels, merely confirming that panel effects occur.

The important questions for testing the strategic account are whether a majority judge on a mixed panel votes differently depending upon the alignment of preferences between the minority member and the Supreme Court (conditions 2 and 4) and whether a minority judge votes differently depending upon her alignment or not with the Supreme Court (conditions 3 and 5). These questions can be answered by using the logistic

regression to generate predictions about how a given judge will vote under a variety of hypothesized conditions.

Figure 4: Estimated Probability of Counter-Ideological Vote

Estimated probabilities for Democratic male judge, using logistic regression model of counter-ideological votes with Supreme Court as reviewing court.

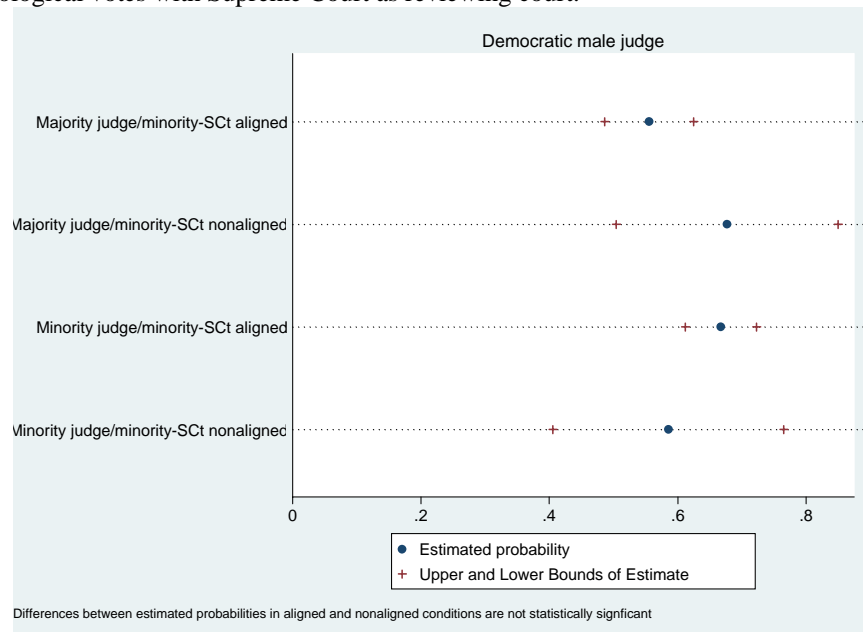


Figure 4 graphically illustrates the predicted probability of a counter-ideological vote (along with the degree of uncertainty for each prediction) under each of the conditions of interest. Because predicted probabilities can only be generated by specifying values for each of the variables in the model, Figure 4 reports the expected voting behavior of a Democratic male judge. When probabilities are generated for other judge party and gender combinations, the same results obtain.¹¹⁵ Comparing the first two rows of Figure 4 reveals that the expected vote of a majority judge does not differ significantly depending on whether the minority judge’s preference is aligned with the Supreme Court’s or not. Similarly, the last two rows show no statistically significant difference in the voting patterns of minority judges in the aligned and non-aligned conditions. Thus, although the strategic account predicts that appellate judges vote with an eye to a possible response by the Supreme Court, I find no empirical evidence that panel effects, as measured by counter-ideological voting, are conditioned on the preferences of the Supreme Court.

B. The Circuit En Banc as Reviewing Court

Table 5 presents the results of the logistic regression when the circuit en banc is considered the reviewing court, rather than the Supreme Court.¹¹⁶ As in the first model,

¹¹⁵ See Appendix, Figure A-1.

¹¹⁶ As explained in note 114, *supra*, I calculate and report robust standard errors clustered by case because the three votes of the appellate panel sitting in a case are not independent.

the variable capturing whether a reversal of the lower court would be required is highly significant. All other control variables—ideological extremity and gender and party variables—are not statistically significant.¹¹⁷ Similar to the first model, the dummy variables for the various voting conditions have positive coefficients and are generally statistically significant, indicating that voting on mixed panels is more likely to be counter-ideological than on homogeneous panels, consistent with observed panel effects.

Table 5. Logistic Regression Model of Counter-Ideological Votes with Circuit En Banc as Reviewing Court

	Coefficient	Robust Standard Error	P> z
Condition 1—Vote for Unified Panel (omitted baseline variable)			
Condition 2—Majority Judge Vote when Minority Judge and Circuit Not Aligned	0.332	0.269	0.217
Condition 4—Majority Judge Vote when Minority Judge and Circuit Aligned	0.821*	0.181	0.000
Condition 3—Minority Judge Vote when Minority Judge and Circuit Not Aligned	1.632*	0.282	0.000
Condition 5—Minority Judge Vote when Minority Judge and Circuit Aligned	1.107*	0.186	0.000
Republican male (omitted baseline variable)			
Republican female	0.256	0.230	0.265
Democratic female	-0.389	0.206	0.059
Democratic male	-0.196	0.178	0.272
Ideological extremity	-0.611	0.323	0.058
Reversal required	-1.253*	0.165	0.000
Constant	-0.133	0.215	0.534

Number of observations = 2361
 Log pseudolikelihood = -1437.4986
 Pseudo R2 = 0.0924

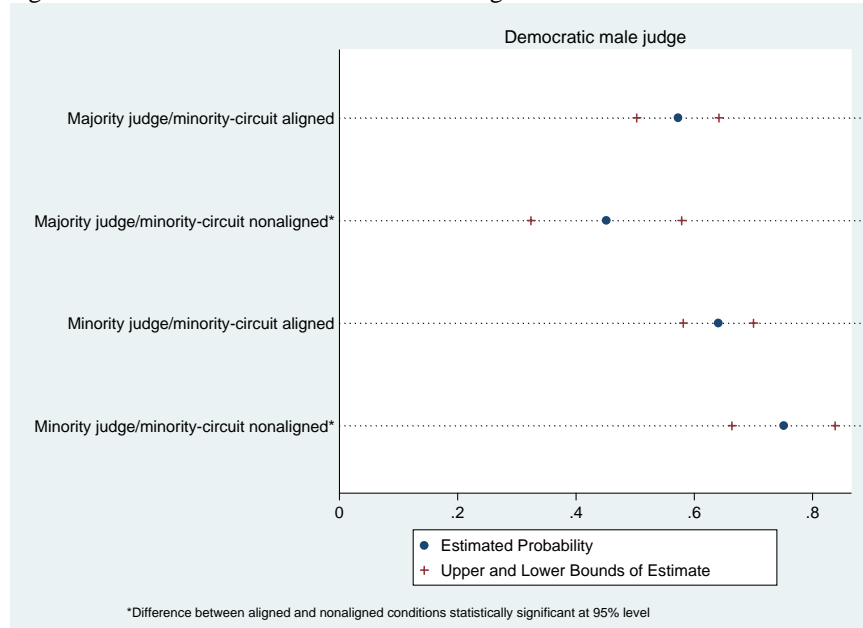
Proportional Reduction in Error = 19.53%
 Bayesian Information Criterion = 2952.666

¹¹⁷ The variables for Democratic female judge and ideological extremity are negatively signed as expected (Democratic female judges are expected to be reluctant to vote against sex discrimination plaintiffs and more ideological judges are expected to be less likely to vote counter-ideologically), but neither is significant at the 95% level. None of the other demographic control variables comes close to statistical significance.

Once again, however, the real question of interest is whether judges vote differently depending upon the alignment of preferences between the minority member and the circuit as a whole. I again use the logistic regression model to compare the estimated probabilities of a counter-ideological vote under different conditions. In order to generate the predicted probabilities, I first consider the likely votes of a Democratic male judge. Figure 5 compares the probability of a counter-ideological vote by such a judge sitting in the majority when the minority and the full circuit are not aligned and aligned (conditions 2 and 4); and the probability of a counter-ideological vote by the judge sitting in the minority, when his preferences and those of the full circuit are not aligned and aligned (conditions 3 and 5).

Figure 5: Estimated Probability of Counter-Ideological Vote

Estimated probabilities for Democratic male judge, using logistic regression model of counter-ideological votes with circuit en banc as reviewing court.



This analysis reveals appellate behavior quite different from that observed when the Supreme Court was treated as the reviewing court. Consider the first two rows of Figure 5. If the judge is a member of the panel majority and the minority judge is not aligned with the circuit ideologically, he has a predicted probability of 45.1% of voting counter-ideologically. However, when the minority panel member is more closely panel member is more closely aligned with the circuit as a whole than with the panel majority, the probability of a counter-ideological vote by that same judge is predicted to *increase* to 57.2%. This

difference in predicted probabilities is statistically significant at the 95% level.¹¹⁸ Consistent with the predictions of the strategic account, it offers evidence that majority judges are more likely to bend to the views of the minority when the minority judge is more closely aligned with the circuit en banc.

Examining the last two rows of Figure 5 reveals that the likelihood of the minority panel member voting counter-ideologically is also influenced by the preferences of the circuit en banc, but in the opposite direction. If the judge's views are not aligned with the circuit as a whole, he is predicted to vote counter-ideologically 75.1% of the time, whereas if his views are so aligned, his predicted probability of voting counter-ideologically *decreases* to 64.1%. This difference is again statistically significant at the 95% level. And once again, the observed probabilities are consistent with the strategic account. When the minority judge's preferences are aligned with those of the circuit as a whole, he is less likely to go along with the majority (and vote counter-ideologically) and more likely to stand his ground. Perhaps he must dissent in order to do so, or perhaps he is able to convince one or both of the majority judges to join him. In either case, he is more likely to vote as predicted under a naïve ideological model and less likely to vote counter-ideologically than when he is not aligned with the circuit.

For all combinations of gender and party of the judge, the probability of a counter-ideological vote changes under different voting conditions in the direction predicted by the strategic account, and in most cases, the change is statistically significant.¹¹⁹ Considering all judge gender-party combinations together, the results strongly suggest that counter-ideological votes—what we observe as panel effects—are conditional on the preferences of the circuit court as a whole.

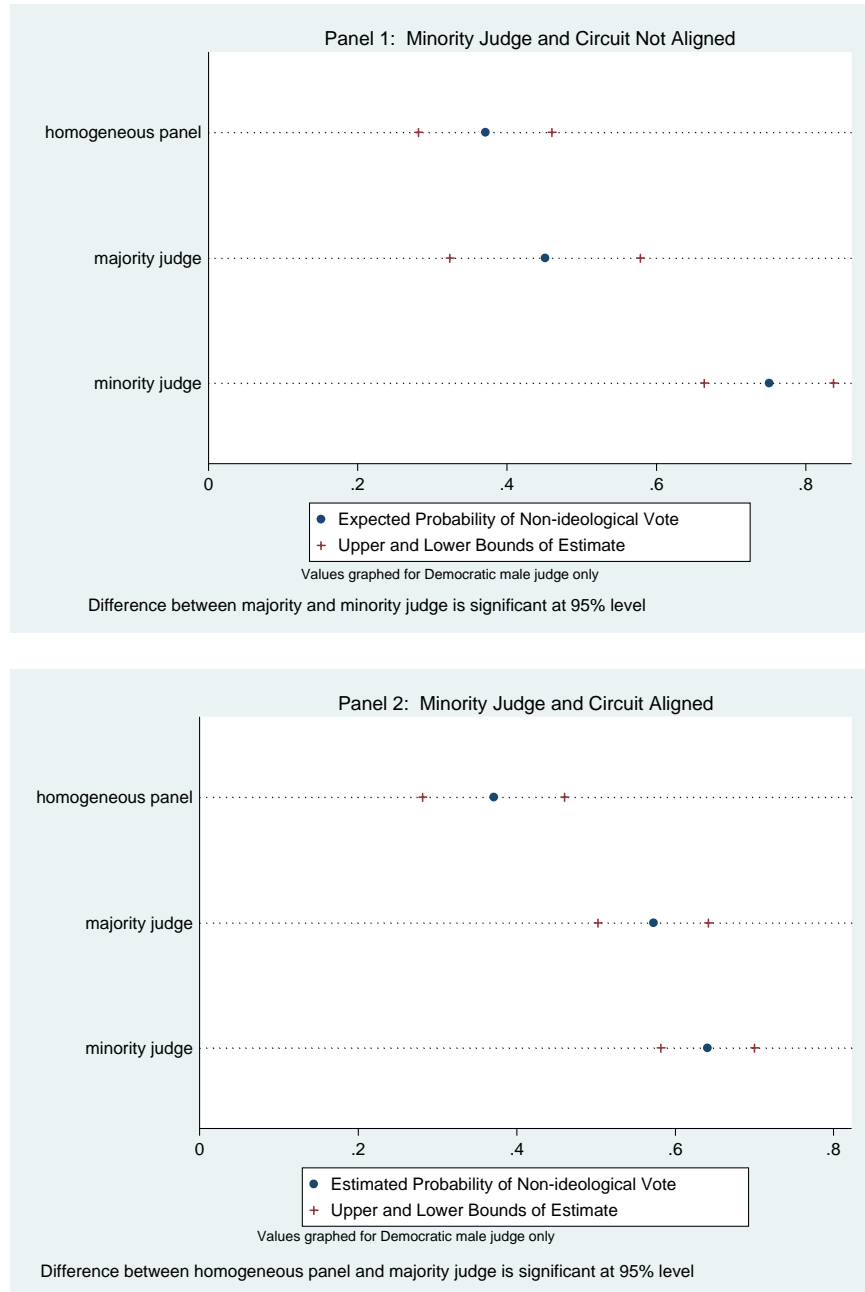
The results of the logistic regression can also be used to estimate changes in the probabilities of a counter-ideological vote by a judge under different voting circumstances, while holding constant the alignment between the minority judge and the full circuit. In the first panel of Figure 6, the preferences of the minority judge and the circuit are not aligned, and the point estimates illustrate how the behavior of a judge

¹¹⁸ Overlapping confidence intervals do not necessarily mean that the difference between estimated probabilities is not statistically significant. See Lee Epstein, Andrew D. Martin & Matthew Schneider, *On the Effective Communication of the Results of Empirical Studies, Part I*, 59 VAND. L. REV. 1811 (2006); Peter C. Austin & Janet E. Hux, *A Brief Note on Overlapping Confidence Intervals*, 36 J. OF VASCULAR SURGERY 194 (2002). For each pair of conditions of interest, I calculated the difference between the expected probabilities and uncertainty surrounding that estimate to determine whether the difference between the two estimated quantities is statistically significant at the 95% level.

¹¹⁹ See Appendix, Figure A-2. Because the predicted probabilities can only be generated by specifying values for all of the variables, including gender and party affiliation of the judge, the results presented are necessarily fine-grained. However, one should be cautious about over-interpreting these results—for example, assuming that Republican male judges are less strategic than Democratic male judges because the difference in predicted probabilities for conditions 2 and 4 for a Republican male judge is not statistically significant at the 95% level. If a slightly more relaxed test is used, the difference in counter-ideological voting for a Republican male judge between conditions 2 and 4 would be considered statistically significant.

changes depending on whether the judge is in the majority or in the minority, using his vote on a unified panel for a baseline comparison.¹²⁰ Although Figure 6 depicts graphically the results for a Democratic male judge, the same substantive results obtain for all other judge gender and party combinations.

Figure 6: Estimated Probability of Counter-Ideological Vote in Different Voting Circumstances



¹²⁰ Figure 6 graphs the expected probabilities for Democratic male judges. The basic substantive results for other gender/party combinations are identical to those in Figure 6.

As the figure illustrates, there is no statistically significant difference in the level of counter-ideological voting between a judge sitting on a homogenous panel and the same judge sitting in the majority on a mixed panel when the minority judge is not aligned with the circuit. There is, however, a difference—both statistically and substantively significant—between the voting patterns of a judge sitting as part of the majority and a judge sitting as the minority when the minority judge is not aligned with the circuit. In other words, under the no-alignment condition, the tendency to vote counter-ideologically turns on whether a judge is in the majority or the minority, a simple consequence of dissent suppression. The presence of one panelist appointed by a President of the opposing party does not appear to significantly affect the likelihood that the majority judge will vote counter-ideologically compared with his votes on a homogeneous panel.

As the second panel of Figure 6 illustrates, the situation is the opposite when the minority judge is aligned with the circuit as a whole. Under that condition, the probability of a counter-ideological vote increases significantly, both statistically and substantively, when a judge is seated with just one opposing-party appointee compared with his vote on a homogeneous panel. The likelihood of a counter-ideological vote does not differ significantly, however, between a majority judge and minority judge when the minority judge is aligned with the circuit. Together, the two panels of Figure 6 suggest that observed panel effects involve two separate effects. The moderation of a majority judge’s vote in the presence of one opposing-party appointee compared with her vote on a unified panel appears to be driven by the alignment between the preferences of the minority judge and the circuit, while the difference between the voting patterns of majority and minority panelists appears to be the result of simple dissent suppression.

IV. DISCUSSION AND IMPLICATIONS

A. *The Role of the Supreme Court and the Circuit En Banc*

The empirical test described here offers no evidence that panel effects are sensitive to the preferences of the Supreme Court. Specifically, I find no support for the theory that minority judges are more likely to vote ideologically in situations in which they could expect that their dissent would serve as a signal encouraging the Supreme Court to review a case. Nor do I find evidence that majority judges respond to such a situation by acceding more readily to the arguments of the minority and voting counter-ideologically. These findings contradict Cross and Tiller’s whistleblowing theory, to the extent that it posits that the presence of a minority judge who will “blow the whistle” induces the panel majority to obey Supreme Court doctrine.¹²¹ More generally, the results call into question the theory that strategic behavior vis à vis the Supreme Court explains panel effects.

¹²¹ Cross & Tiller, *supra* note 10, at 2159.

In addition, this study raises questions for traditional principal-agent models of the judicial hierarchy.¹²² These models typically assume that the Supreme Court's reversal power is crucial for insuring lower court compliance with doctrine. In order to explain how the Supreme Court can exercise effective control given that it currently reviews less than 1% of court of appeals decisions, theorists have suggested that various mechanisms, such as signaling mechanisms, enhance the Court's control.¹²³ The results of this study undermine the plausibility of at least one of those theorized mechanisms—that the risk of dissent by a minority panel member will induce compliance by appellate judges without the necessity of actual Supreme Court review. While dissent may serve as a useful signal to the Supreme Court when deciding which cases to hear, the increased possibility of review in the presence of a potential dissenter does not appear to influence the panel voting behavior of court of appeals judges.

On the other hand, these results should not be misunderstood to suggest that court of appeals judges do not follow Supreme Court doctrine. Numerous studies have found that the decisions of the Supreme Court have an impact on lower court decision-making,¹²⁴ and the results here are not inconsistent with those findings. Circuit judges do not vote according to a naïve ideological model, and the large degree of overlap in voting behavior between judges affiliated with opposite parties indicates that factors other than ideology—in all likelihood legal doctrine—influence their decisions. However, even though the preferences of the Supreme Court Justices shape appellate decision-making through the precedent they establish, those preferences do not appear to influence panel effects. The observed tendency of appellate judges to be influenced by their panel colleagues does not depend on the risk that a dissent will provoke review and reversal.

In contrast to the results of the Supreme Court model, this study provides strong evidence that the preferences of the full circuit influence panel effects. Bargaining and compromise on the part of majority judges is more likely to occur when the panel minority is aligned with the circuit as a whole. Moreover, a minority judge is more likely to stand her ground and refuse to go along with the majority's preferences when she is more closely aligned with the circuit than with the majority. These results are precisely those predicted by a strategic account of panel decision-making. Strategic judges are hypothesized to anticipate the actions of the circuit en banc. When the minority is aligned with the circuit, the minority judge perceives that she would be better off, and the majority judges perceive that they would be worse off, if the circuit were to hear the case en banc, and therefore the panel judges adjust their voting behavior accordingly.

Comparing the results of the two models raises the question why panel effects appear to be influenced by the circuit's preferences, but not the Supreme Court's. Rehearing en banc and Supreme Court review are both extremely unlikely events. The chance of either occurrence in any given court of appeals case is less than 1%. Thus, the

¹²² See notes 58-61 and accompanying text.

¹²³ Cross & Tiller, *supra* note 10; HETTINGER ET AL., *supra* note 21.

¹²⁴ See note 82, *supra*, and sources cited therein.

simple statistical risk of reversal cannot explain the difference in influence. A more likely explanation is that the relationship of the circuit judge to the circuit as a whole is quite different from her relationship to the Supreme Court. The individual appellate judge interacts with other judges on the same circuit on a regular basis—on other panel sittings, in the context of administrative functions and even casually in the halls of the courthouse.¹²⁵ By contrast, she is far less likely to interact directly with Supreme Court Justices, and may perceive them only as a remote presence whose primary communications are the written opinions they issue. Because of the routine, on-going interactions among judges within a circuit, the views of their immediate colleagues will be far more salient for panel members when they deliberate than the preferences of the Supreme Court.

The possibility of an en banc hearing is also likely to be more salient than the risk of Supreme Court review because the costs of the former will be felt immediately by the appellate judge. When a case is reheard en banc, the three judges who constituted the original panel must rehear the case with their other circuit colleagues, consuming more of their time and effort. Rehearing en banc is also costly for this court as a whole. Ginsburg and Falk estimate that a case reheard en banc by the D.C. Circuit “consumes as much of the court’s resources as five or six cases heard by a panel,” because every judge on the circuit needs to spend time reading the briefs, familiarizing themselves with the facts and relevant law, rehearing oral argument and deliberating about the outcome.¹²⁶ On a larger court, where an en banc rehearing will involve more judges, the costs will be even higher. Importantly, these costs are very visible to appellate judges, for they will be borne by the panel members themselves, as well as their close colleagues, and they are incurred whether the panel decision is ultimately reversed or affirmed. By contrast, review by the Supreme Court is only costly if the panel decision is reversed; an affirmation by the Supreme Court is more likely viewed as a benefit. And while a reversal by the Supreme Court may impose a policy or reputational loss on the panelists, it will likely require them to do little more than vacate their prior decision and remand to the district court for further proceedings.

The fact that circuit preferences, but not Supreme Court preferences, appear to influence panel deliberations suggests that circuit judges feel particularly responsible to the circuit of which they are a part. Scholars have argued that appellate judges are “representatives of the circuit,”¹²⁷ and that panel decisions are expected to emulate the results that would be expected to be reached by the full circuit.¹²⁸ Similarly, Ginsburg and Falk argue that appellate courts “function[] best when each member feels responsible

¹²⁵ All of the judges in a circuit do not necessarily have their chambers in the same building; nevertheless, because of rotating panel assignments, they will at times be in the same place physically, even if they are not sitting together during a particular court session.

¹²⁶ Ginsburg & Falk, *supra* note 4, at 1020.

¹²⁷ Solimine, *supra* note 62, at 49.

¹²⁸ Kornhauser & Sager, *supra* note 5, at 89.

to each of the others, and responsible for the performance of the whole.”¹²⁹ Such a situation “works to increase collegiality on the court.”¹³⁰ Thus, to the extent that appellate judges conceive their role as agents acting on behalf of the full circuit, their ability to influence one another during panel deliberations is likely to depend upon how the panel members perceive the preferences of the circuit as a whole.

B. *Internal Panel Dynamics*

Although the results of this study are entirely consistent with a strategic account of panel effects—at least vis à vis the circuit en banc—they do not conclusively establish that strategic behavior *explains* panel effects. More specifically, they do not establish the precise mechanism by which circuit preferences influence panel effects. Certainly, dissent suppression theories remain relevant to explain why minority judges are more likely to vote counter-ideologically than majority judges in general. But the results here are consistent with some alternative explanations of panel effects as well.

Strategic theories suggest that any observed changes in voting patterns reflect judges’ calculations about how the full circuit might respond to the panel decision. Thus, while deliberating about a case a judge might say to her panel colleagues, “If you insist on resolving the case that way, I am going to dissent. You know that my dissent will make it more likely that the circuit will hear this case en banc, and if it does, it will likely decide in a manner that I prefer (and you don’t).” This sort of reasoning may not be voiced explicitly, but strategic theories argue that it lies behind the decision-making of the panel members.

It is also possible, however, that judges neither speak nor even reason internally in such an explicitly strategic manner. They may instead be influenced by the views of their panel colleagues in other ways that are better explained in psychological or social terms. For example, the process of panel deliberation may actually alter judges’ perceptions and sincere views of a case. By studying only votes, there is no way of knowing whether or not a shift in voting behavior represents a strategic calculation or a genuine change in belief. Nevertheless, judges have reported that deliberation with colleagues may change their view,¹³¹ and several empirical studies suggest that judges’ preferences sometimes shift in response to the parties’ arguments or over time.¹³²

¹²⁹ Ginsburg & Falk, *supra* note 4, at 1013.

¹³⁰ *Id.* at 1013.

¹³¹ See, e.g., Edwards, *Effects of Collegiality*, *supra* note 3.

¹³² See, e.g., Lee Epstein, Andrew D. Martin, Kevin Quinn & Jeffrey A. Segal, *Ideological Drift Among Supreme Court Justices; Who, When, and How Important?*, 101 NW. U. L. REV. 1483 (2007); James Spriggs, Timothy R. Johnson & Paul J. Wahlbeck, *The Influence of Oral Arguments on the U.S. Supreme Court*, 100 AM. POL. SCI. REV. 99 (2006); Theodore Ruger, *Justice Harry Blackmun and the Phenomenon of Judicial Preference Change*, 70 MO. L. REV. 1209 (2005).

One possible theory, proposed by Sunstein et al., is that well-established psychological phenomena like conformity effects and group polarization explain how internal panel deliberations shift judges' preferences.¹³³ These psychological theories are difficult to verify empirically because they emphasize processes that are internal to individual judges and cannot be observed directly.¹³⁴ Of even greater concern, these theories extend conclusions drawn from behavior in experimental settings to the quite different circumstances under which judges decide cases, raising serious doubts about their generality.¹³⁵ In particular, certain aspects of judicial decision-making—notably, interpreting and applying the law—are quite different in nature from the types of tasks like making judgments about facts that have been the focus of experimental psychology research. As Schauer argues, it is “a mistake to draw conclusions about how judges perform a range of judge-specific tasks from what we have found about how lay people perform quite different tasks.”¹³⁶ Even if they can be appropriately extrapolated to judges, psychological phenomena like conformity effects and group polarization would

¹³³ See SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 67-76.

¹³⁴ For example, the theory that judges “go to extremes” after deliberating with like-minded colleagues cannot be tested without some way of measuring individual judges' opinions *prior* to their deliberation on a unified panel. SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 72. Sunstein and his colleagues take as evidence of group polarization the fact that judges' votes on unified panels differ from those on mixed panels. For example, a Democratic-appointee sitting with two other Democratic-appointees will vote liberally a significantly greater percentage of the time than when sitting with one Democratic-appointee and one Republican-appointee. But without knowing the baseline preferences of judges *prior* to deliberation (or even better, prior to the assignment of panels), it is impossible to know what effect interaction with colleagues has on a judge's opinions. It might be the case that a judge's vote on a unified panel reflects her “true” preferences and that sitting with judges of the other party leads to moderation of those views. In other words, compromise, rather than “going to extremes,” may explain the observed difference in voting patterns on unified and mixed panels. Without a baseline measure of judge's “true” preferences, these two accounts simply cannot be disentangled.

¹³⁵ The “group polarization,” for example, has been documented in groups of “like-minded” subjects and is hypothesized to occur because groups of like-minded people have access to a limited pool of arguments, individuals wish to be viewed favorably by other group members and corroboration strengthens individual views. *Id.* at 73-76. Appellate judges, however, typically decide cases in very small groups of three, with colleagues who share their professional training and institutional interests, and subject to a set of institutional and cultural norms regarding appropriate methods for making decisions. The “argument pool” available to them includes not only the views of the three panel members, but also those presented by the litigants in briefs and oral arguments and the opinions of other judges in similar cases. And to the extent that judges wish to be viewed favorably, that concern likely extends not just to their two co-panelists, but to the litigants in the case and their lawyers, as well as other lawyers, judges and potentially a broader public, given that judges express their views in a particularly public way. These differences from experimental conditions raise questions as to whether and to what extent decision-making by judges will resemble that observed in the experimental setting. Guthrie, Rachlinski, and Wistrich have collected experimental evidence suggesting that while judges are subject to the same cognitive biases as everyone else, they are also able to overcome those biases in certain contexts. See Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 27-29 (2007).

¹³⁶ Frederick Schauer, *Is There a Psychology of Judging?* in DAVID E. KLEIN & GREGORY MITCHELL, EDS., *THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* (forthcoming 2008), available at <http://ssrn.com/abstract=1015143>.

operate in the same way regardless of the preferences of the full circuit and thus, they offer no explanation for the empirical findings here.

Alternative psychological theories may offer a better account of why panel effects are observed and how they are influenced by circuit preferences. Chris Guthrie, Jeffrey J. Rachlinski and Andrew J. Wistrich propose an “intuitive-override” model of judging based on findings that people engage in two modes of decision making: intuitive and deliberative.¹³⁷ Intuitive processes are automatic, quick and not demanding cognitively.¹³⁸ By contrast, deliberative processes are slower and require effort and concentration.¹³⁹ Although intuitive judgments are often accurate, the heuristics and mental shortcuts that underlie them can have a biasing effect, leading to systematic error. Guthrie et al. offer experimental evidence that district court judges are in fact prone to intuitive decision-making, but are also capable of deliberative decision-making under certain conditions.¹⁴⁰ A similar mechanism might underlie decision-making by appellate court judges. More specifically, court of appeals judges might initially rely on intuitive judgments—quick decisions that tend to align with their policy preferences—but those judgments may yield if subjected to more deliberative processes. The presence of a judge with a different ideological orientation might induce such a deliberative process on the part of the majority judges, whereas the judges’ initial (intuitive) judgments may go unexamined on a unified panel.¹⁴¹

This intuitive-override model suggests an alternative account that explains why judges on mixed panels decide cases less ideologically than judges on unified panels, but why would these effects depend upon circuit preferences? The answer likely lies in the nature of the deliberative process. If a minority judge induces the majority to re-examine their initial conclusion, she probably does so by discussing precedent and making legal arguments. And it may be the case that a minority judge will be most successful in convincing the panel majority to change its views when her own views are more closely aligned with the circuit’s than with the majority’s. Because the views of the circuit are likely embodied in the law of the circuit, the minority judge will have more powerful

¹³⁷ Guthrie et al., *supra* note 135, at 6-9.

¹³⁸ *Id.* at 7, and sources cited therein.

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 27-29.

¹⁴¹ Although Cross and Tiller primarily describe their whistleblower theory in strategic terms, they acknowledge another possibility—that appellate judges do not deliberately disregard the law, but that “cognitive shortcuts” may lead to “apparently political results.” If this is the case, “the minority judge can serve as a whistleblower by revealing these biasing cognitive shortcuts.” Cross & Tiller, *supra* note 10, at 2174. Sunstein et al. similarly characterize any “whistleblower” effect in psychological rather than strategic terms. *See, e.g.,* SUNSTEIN ET AL., ARE JUDGES POLITICAL?, *supra* note 10, at 79 (“The whistleblower can draw her colleagues’ attention to legally relevant arguments that, while not necessarily decisive, deserve careful consideration and sometimes make a difference to the outcome.”)

legal arguments when she is aligned with the full circuit. In other words, minority judges will be most persuasive—and panel effects most apparent—when the law is on their side.

Without more evidence, it is difficult to disentangle which of these mechanisms actually explains why panel effects occur. This study cannot resolve that question; however, it strongly suggests that, whatever the mechanism, panel effects are sensitive to the circuit environment. In short, when appellate judges deliberate on panels of three, they do not do so in a vacuum, but are influenced by the circuit of which they are a part.

CONCLUSION

Scholars have increasingly come to recognize that judges do not simple-mindedly pursue their preferences. Rather, they are strategic actors whose behavior is influenced not only by their policy goals, but by the institutional context in which they operate as well. One of the most important insights relating to the work of federal court of appeals judges is the recognition that panel composition matters. Appellate judges are influenced not only by their own preferences, but also those of their colleagues with whom they hear cases. Identifying panel effects as a critical component of appellate decision-making has raised further questions about when and why these effects occur.

Understanding why panel effects occur is crucial to answering questions about policy and institutional design. If panel effects tend to moderate the influence of ideology, should they be encouraged? And if so, what institutional changes might increase this moderating effect? Based on their “whistleblower” theory, Frank Cross and Emerson Tiller propose a rule that every appellate panel be comprised of at least one judge from each political party so that the judge in the ideological minority can draw the attention of the Supreme Court to any “disobedience” of the law.¹⁴² But is such a rule wise policy if their theory of panel effects is wrong? Others have argued for reforms such as increasing the number of appellate judgeships or splitting the Ninth Circuit. Judging the wisdom of these changes, however, requires an understand of how appellate judges interact—both within the three-judge panel and across the circuit as a whole.

This Article offers a first step in better understanding panel effects. The analysis conducted here does not support the theory that panel effects are caused by strategic behavior aimed at inducing or avoiding Supreme Court review. On the other hand, the findings strongly suggest that panel effects are influenced by circuit preferences. Both minority and majority judges on ideologically mixed panels differ in their willingness to vote counter-ideologically, depending upon how the circuit as a whole is aligned relative to the panel members. These results are consistent with the theory that circuit judges behave strategically with an eye to circuit en banc review. It is also possible, however, that court of appeals judges are responding to their circuit environment more generally, or to circuit doctrine more specifically, rather than acting specifically out of fear of a reversal en banc.

¹⁴² Emerson H. Tiller & Frank B. Cross, *A Modest Proposal for Improving American Justice*, 99 COLUM. L. REV. 215 (1999).

A great deal more empirical work remains to be done to fully understand panel effects. The data examined here include only Title VII sex discrimination cases, even though panel effects have been documented in a broad variety of issue areas. Empirical analysis of the causes of panel effects should be extended to other areas of law to determine whether similar patterns are observed, as well as to unpublished opinions in which the causes of panel effects may differ. In addition, more work needs to be done to disentangle the different motivational accounts of panel effects. Looking beyond votes and examining the impact of panel composition on reasoning as well will further enhance understanding of how interactions among colleagues affect judicial decision-making. In the end, it is likely that panel effects, like judicial decision-making more generally, can only be understood by taking account of a variety of factors—strategic, ideological, psychological and legal.

APPENDIX

Table A-1. Logistic Regression Model of Counter-Ideological Votes with Supreme Court as Reviewing Court, including Circuit Fixed Effects

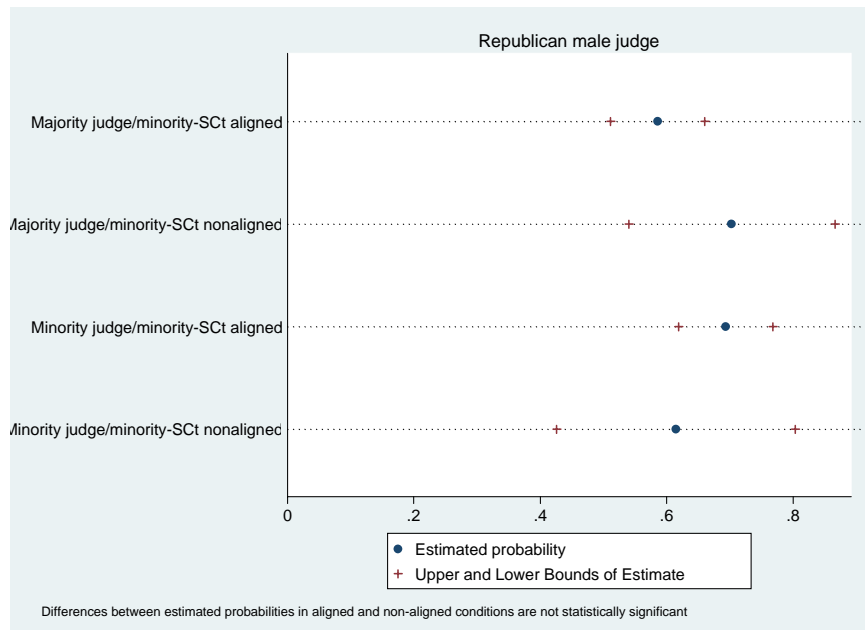
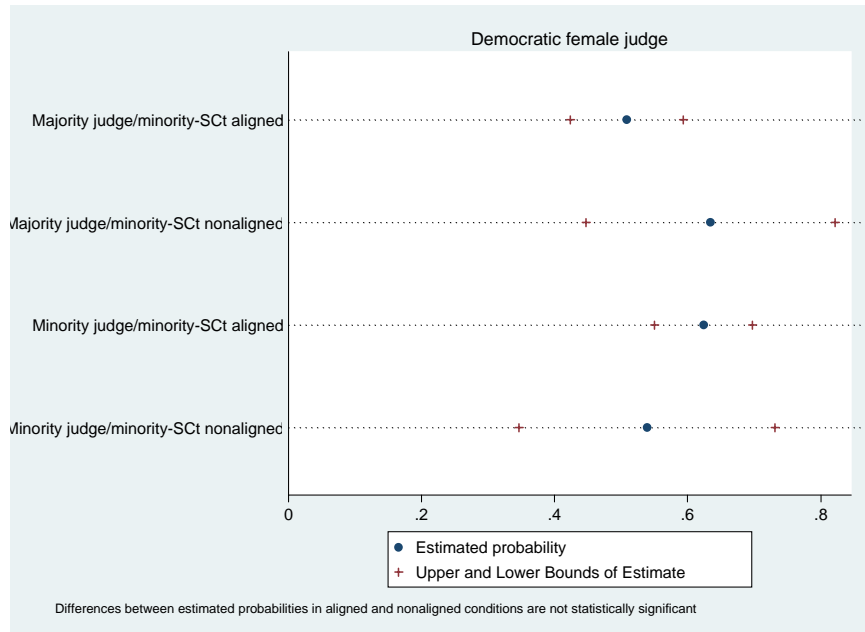
	Coefficient	Robust Standard Error	P> z
Condition 2—Majority Judge Vote when Minority Judge and Sup. Ct. Not Aligned	1.149*	0.402	0.004
Condition 4—Majority Judge Vote when Minority Judge and Sup. Ct. Aligned	0.751*	0.175	0.000
Condition 3—Minority Judge Vote when Minority Judge and Sup. Ct. Not Aligned	0.707	0.439	0.107
Condition 5—Minority Judge Vote when Minority Judge and Sup. Ct. Aligned	1.218*	0.185	0.000
Republican female	0.215	0.225	0.340
Democratic female	-0.300	0.212	0.156
Democratic male	-0.072	0.179	0.687
Ideological extremity	-0.316	0.332	0.341
Reversal required	-1.263*	0.165	0.000
2 nd Circuit	-0.543	0.287	0.058
3 rd Circuit	-0.248	0.251	0.323
4 th Circuit	-0.116	0.264	0.661
5 th Circuit	0.689	0.374	0.065
6 th Circuit	-0.315	0.287	0.273
7 th Circuit	-0.225	0.270	0.406
8 th Circuit	0.012	0.321	0.970
9 th Circuit	-0.022	0.250	0.929
10 th Circuit	-0.195	0.253	0.442
11 th Circuit	-0.517	0.281	0.066
D.C. Circuit	-0.170	0.336	0.612
Constant	-0.131	0.307	0.669

Number of observations = 2361
 Log pseudolikelihood = -1426.6807
 Pseudo R2 = 0.0992

Proportional Reduction in Error = 20.1%
 Bayesian Information Criterion = 3016.465

Figure A-1: Estimated Probability of Counter-Ideological Vote

Estimated probabilities for Democratic female, Republican male and Republican female judges, using logistic regression model of counter-ideological votes with Supreme Court as reviewing court.



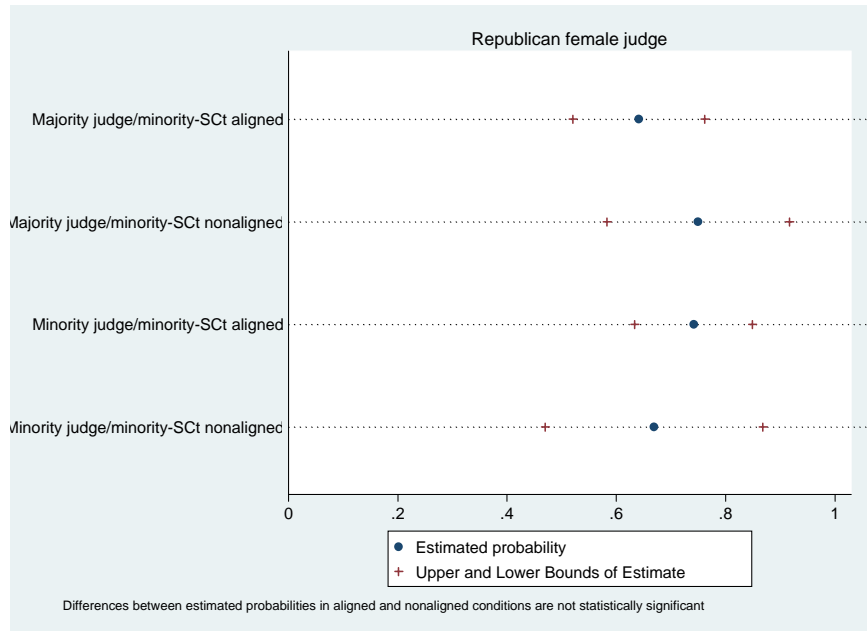


Table A-2. Logistic Regression Model of Counter-Ideological Votes with Circuit En Banc as Reviewing Court, including Circuit Fixed Effects

	Coefficient	Robust Standard Error	P> z
Condition 2—Majority Judge Vote when Minority Judge and Circuit Not Aligned	0.344	0.269	0.202
Condition 4—Majority Judge Vote when Minority Judge and Circuit Aligned	0.875*	0.180	0.000
Condition 3—Minority Judge Vote when Minority Judge and Circuit Not Aligned	1.621*	0.287	0.000
Condition 5—Minority Judge Vote when Minority Judge and Circuit Aligned	1.157*	0.187	0.000
Republican female	0.236	0.227	0.299
Democratic female	-0.376	0.213	0.077
Democratic male	-0.145	0.182	0.425
Ideological extremity	-0.574	0.336	0.087
Reversal required	-1.285*	0.166	0.000
2 nd Circuit	-0.572*	0.285	0.045
3 rd Circuit	-0.288	0.249	0.249
4 th Circuit	-0.127	0.263	0.629
5 th Circuit	0.647	0.373	0.083
6 th Circuit	-0.330	0.286	0.250
7 th Circuit	-0.244	0.267	0.362
8 th Circuit	0.005	0.320	0.987
9 th Circuit	-0.029	0.248	0.906
10 th Circuit	-0.236	0.251	0.348
11 th Circuit	-0.544	0.278	0.051
D.C. Circuit	-0.155	0.334	0.644
Constant	-0.006	0.306	0.985
Number of observations = 2361		Proportional Reduction in Error = 21.3%	
Log pseudolikelihood = -1422.6359		Bayesian Information Criterion = 3008.376	
Pseudo R2 = 0.1018			

Figure A-2: Estimated Probability of Counter-Ideological Vote

Estimated probabilities for Democratic female, Republican male and Republican Female judges, using logistic regression model of counter-ideological votes with circuit en banc as reviewing court.

