

# Politics from the Bench? Ideology and Strategic Voting in the U.S. Supreme Court\*

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## Abstract

In the United States, Supreme Court justices often vote along ideological lines. Why this is the case remains incompletely understood. To learn more about justices' preferences and the nature of decision-making in the Court, we differentiate between votes that were pivotal and those that were not. We find that in situations in which a justice is pivotal, her ideology is even more predictive of her vote than usual, especially when her choice matters for unambiguously establishing legal precedent. To interpret this previously unknown pattern in the data, we develop a model of voting in which justices have both expressive and instrumental preferences. That is, the justices strategically trade off which litigant should prevail based on the merits of a case with their desire to shape precedent.

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“Judges and justices are servants of the law, not the other way around. Judges are like umpires. Umpires don’t make the rules; they apply them. [...] Judges are not politicians [...] If I am confirmed, I will confront every case with an open mind. I will fully and fairly analyze the legal arguments that are presented. [...] And I will remember that it’s my job to call balls and strikes and not to pitch or bat.”

– Chief Justice John Roberts, Sept. 12, 2005

“I pay very little attention to legal rules, statutes, constitutional provisions [...] A case is just a dispute. The first thing you do is ask yourself—forget about the law—what is a sensible resolution of this dispute?”

– Judge Richard A. Posner, Sept. 11, 2017

## 1. Introduction

Alexis de Tocqueville (1835) famously quipped that, in the United States, there is hardly any political question that sooner or later does not turn into a judicial question. As a consequence, the U.S. Supreme Court is regularly called upon to resolve some of the nation’s most important controversies. Chief Justice Roberts’ assertion that judges are not politicians notwithstanding, the justices’ votes on the merits of a case often align with their perceived ideological predispositions (see, e.g., Pritchett 1948). Why ideology predicts votes, however, remains an open question. Are the justices “politicians in robes,” who (ab)use their unique position to resolve politically-charged legal questions in accordance with their personal views? Or, do the liberals and conservatives on the bench simply adjudicate based on different legal philosophies, with different implications for the correct ruling in a subset of cases?<sup>1</sup>

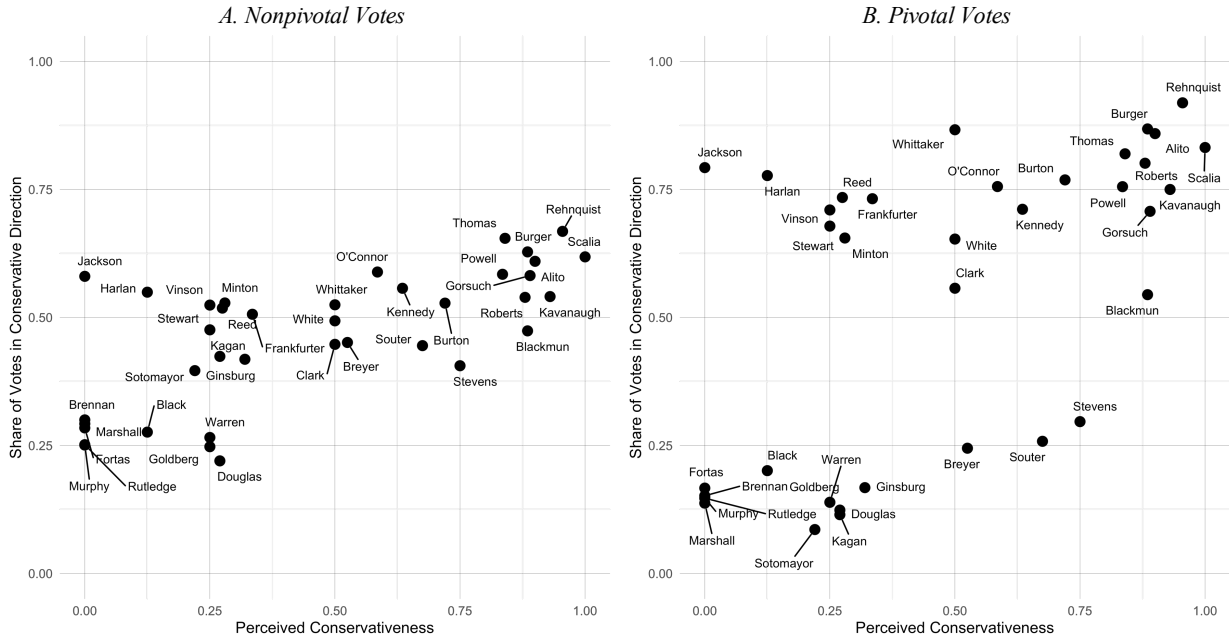
Given the vast influence that the courts exert over social and economic life in common law countries, understanding the determinants of judicial decisions is an issue of first-order importance. As an empirical matter, however, distinguishing between different theories of judicial decision-making is difficult. This is especially true in the context of the U.S. Supreme Court, which tends to decide cases that leave significant room for both discretion and interpretation—either because the relevant parts of the Constitution contain open-ended language, or because the drafters did not foresee the issue at hand. Even if the justices are trying to call the balls and strikes, their decisions may inadvertently end up having an ideological tinge when different legal philosophies, socioeconomic backgrounds, or life experiences lead them to interpret the same text differently. According to Posner (2016), “this is not an usurpation of power but an inevitability.”

In this paper, we revisit the role of ideology in judicial decision-making. The evidence we present suggests that, when the opportunity permits, justices vote strategically on the

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<sup>1</sup>Think, for instance, of the dichotomy between “originalism” and the pragmatist view of the “living Constitution.”

**Figure 1: Pivotal vs Nonpivotal Votes**



Notes: Figure shows the association between justices' perceived ideology at the time of their appointment to the Supreme Court and the conservativeness of their voting record in situations in which their choice is irrelevant for the case disposition (left panel) vis-à-vis those in which their vote is pivotal (right panel). Justices' votes on the merits of a case are classified as either liberal or conservative according to the expert assessments in the Supreme Court Database (Spaeth et al. 2021), while Segal–Cover scores proxy for justices' ideology (Segal and Cover 1989). For a detailed description of these data, see the Data Appendix.

merits of individual cases. We arrive at this conclusion by differentiating between situations in which a justice's vote is pivotal for the outcome of a case and those in which it is not. Taking this approach, we document two hitherto unknown patterns in the data. These empirical regularities are difficult to rationalize through the lens of theories, in which the justices vote expressively and care only about the outcome of the case before them. They follow naturally, however, from a simple model in which justices trade off which litigant should prevail based on the merits of a case with their desire to shape future jurisprudence.

The first empirical regularity that we document is illustrated in Figure 1. Relying on expert codings of justices' votes as either liberal or conservative as well as one of the primary measures of ideology used in the literature on judicial politics, the figure plots a justice's share of votes in the conservative direction ( $y$ -axis) against how conservative she was thought to be when she took the bench ( $x$ -axis). The panel on the left restricts attention to cases in which, all else equal, her vote was irrelevant for the Court's ruling, whereas the panel on the right focuses on situations in which she was pivotal. Clearly, ideological cleavages are significantly greater in situations where a justice's own vote determines the outcome of the case.

Note, however, Figure 1 shows raw data. Although the pattern therein is suggestive of

strategic behavior, it is also consistent with a standard spatial model of voting. Intuitively, the reason for why even expressive behavior can yield bifurcation of justices in closely decided cases is that these cases are likely the ones that are especially divisive on ideological grounds. Thus, conditional on a case being divisive, one would expect liberal justices to vote liberally, while conservative justices should vote conservatively. Our econometric approach directly addresses this confound by conditioning on whether a particular case was decided by a minimal winning coalition. While some of the difference between the two panels in Figure 1 is undoubtedly due to closely decided cases being especially divisive, our results suggest that this cannot be the whole explanation for why the justices polarize when they are pivotal.

The second empirical regularity we uncover further distinguishes between being pivotal for the disposition of the case and being pivotal for setting legal precedent. We find the effect of pivotality on voting behavior primarily manifests when justices are pivotal for precedent. When, all else equal, justices can only affect the outcome of a particular case but not precedent, ideology plays no detectably greater role in determining their votes than usual. In the same vein, examining which opinions the justices choose to join, we show that when they are pivotal for setting precedent, they are significantly *less* likely to simultaneously agree with the majority on the merits of the case but disavow its legal reasoning. By contrast, in situations in which, all else equal, their choice only matters for the case disposition (but not precedent), the justices are *more* likely to express different legal views through special concurrences. Taken together, the data suggest that the justices are sensitive to how their own choices in the process of resolving a particular case influence future jurisprudence. As we explain below, this finding is inconsistent with several prominent theories of judicial decision-making.

From a theoretical perspective it may not be immediately obvious why justices' ideology would be more heavily correlated with their votes in situations in which they are pivotal. After all, when voting on the merits of a case, justices typically face a binary choice between upholding and reversing the lower court's ruling. Both the canonical pivotal voter model as well as expressive theories predict that, when faced with only two alternatives, agents always choose their most preferred one, irrespective of the circumstances. To provide one possible explanation for our descriptive findings, we develop a simple game-theoretic framework of decision-making in the Court.

In the model, justices with different legal philosophies care both about their own vote as well as the outcome of the case. That is, they have expressive *and* instrumental preferences. Specifically, we assume that justices derive utility from correctly applying the law *as they see it*. This may be due to an intrinsic motivation to uphold the role of a justice as an umpire and applier of the law, or it might be because justices are concerned about their personal

reputation or that of the Court (i.e., they dislike being perceived as ideologues). At the same time, taking the descriptive evidence at face value, we assume that they also care about the outcome of the case insofar it determines the evolution of precedent.

In equilibrium, a justice who knows that her vote is not pivotal will decide based upon her personal belief about the correct ruling on legalistic grounds. Since liberal and conservative justices differ in their interpretation of current law and, therefore, their perception of the legal status quo, votes will generally be correlated with their ideological predispositions. A justice who is pivotal, however, may face a trade-off between affecting future jurisprudence and upholding the law in a particular case. That is, a conservative (liberal) justice might wish to cast a conservative (liberal) vote in order to move the legal status quo further to the right (left)—even when she knows that current law favors the opposite disposition. Since justices do not face this kind of strategic incentive unless their vote matters for how the dispute before them is actually decided (and hence how precedent will evolve), their own ideology plays an even greater role in determining pivotal votes.

Lastly, we consider alternative explanations for our key findings. Posner (2016) and Epstein et al. (2013) argue that pivotal justices fall back on their ideology as a form of tie breaker in cases in which the law is unclear. Although legalistic uncertainty is likely an important element of cases reaching the Supreme Court, we find no evidence to suggest that it is the reason for why we observe a stronger correlation between ideology and pivotal votes. Instead, the data suggest that Supreme Court justices strategically trade off which party should prevail based on the merits of a case with their personal views over the evolution of precedent.

Apart from raising normative concerns, the findings in this paper have potentially important implications for our understanding of judges' preferences and the nature of judicial decision-making. Although social scientists have long recognized that judges' votes correlate with their ideology (e.g., Pritchett 1948; Segal and Cover 1989; Sunstein et al. 2007), *why* we observe this correlation remains only incompletely understood.

## 2. Related Literature

The long-dominant “attitudinal model” posits that Supreme Court justices decide cases based on their deeply held ideological views vis-à-vis the facts of the case. Case facts act as stimuli that trigger latent affinities and thereby induce a preference for a justice’s vote on the case disposition (i.e., which litigant wins and which loses) independent of the precedent their decision sets (see, e.g., Segal and Spaeth 2002). According to this purely behavioral theory, the justices do not respond to any kind of strategic incentive; they care only about how they themselves vote. By contrast, proponents of the “case-space approach” conceive of justices

as having preferences over legal rules with different implications for the correct ruling in a particular case (see Kornhauser 1992; Cameron 1993; Parameswaran et al. 2018). The case-space approach can, but need not, accommodate strategic behavior. That is, justices may either simply apply their preferred legal rule, or they may strategically alter their decision in a given case in order to affect which rules apply to future disputes.

In response to such accounts of decision-making in the Court, some scholars have argued that the justices do, in fact, act strategically (e.g., Maltzman et al. 2000; Enns and Wohlfarth 2013)<sup>2</sup>. Still, even in these models, the justices are assumed to care about which litigant wins, rather than the content of the law they create. By contrast, the law and economics literature on the evolution and efficiency of common law tends to model judges as forward-looking decision-makers whose primary motivation is to shape precedent and thereby affect future jurisprudence (see, e.g., Gennaioli and Shleifer 2007; Ponzetto and Fernandez 2008; Baker and Mezzetti 2012). Given that all of the aforementioned models predict a correlation between judges' votes and their inherent ideological biases, what exactly judges care about and how they arrive at their decisions remains unknown.

Extant evidence on strategic behavior by Supreme Court justices is either anecdotal, or it comes from preliminary votes (see, e.g., Perry 1991; Epstein and Knight 1998; Maltzman et al. 2000). Boucher and Segal (1995), for instance, examine justices' votes on which cases the Court should hear. The authors argue that justices sometimes strategically object to hearing disputes that they anticipate losing on the merits. Even if disentangling expressive and strategic behavior without observing justices' views and expectations of the merits of a case were straightforward, evidence of this kind is perfectly consistent with the view that the justices care about which litigant ultimately wins *as well as* the idea that they are motivated by making new law. Both yield predictions that are observationally equivalent in this and many other settings.

Some of the strongest evidence on strategic voting in the Supreme Court comes from Iaryczower and Shum (2012). Their primary goal is to examine the value of case-specific information in judicial decision-making, but since it is *a priori* unclear whether justices vote strategically, the authors structurally estimate both an expressive and a strategic model.<sup>3</sup>

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<sup>2</sup>While Enns and Wohlfarth (2013) appear to be addressing a similar set of questions, their approach is distinct from ours. In particular, while we focus on pivotality, their focus is on "swing" justices or the most ideologically moderate member of minimum winning coalitions. Additionally, while our notion of strategic voting is directly related to the voting game played by justices, Enns and Wohlfarth are concerned with *external* forces and concerns that might influence the votes of swing justices.

<sup>3</sup>In the baseline version of their model, justices care only about whether their own vote aligns with the correct (but unknown) interpretation of the law. In the strategic version, the justices care solely about the Court's ultimate ruling. As in Feddersen and Pesendorfer (1998) and Austen-Smith and Banks (1996), the justices vote simultaneously and *condition* their vote on being pivotal. For additional empirical work on the implication of strategic decision-making in lower courts, see Iaryczower et al. (2018).

The results from either version suggest that case-specific information exerts a significant influence on justices' decisions. Iaryczower and Shum also find that the probability that an individual justice rules in favor of the defendant depends on the ideologies and qualifications of her colleagues, which they interpret as evidence of strategic voting.

There are at least two important differences between our work and that of Iaryczower and Shum (2012). First, rather than structurally estimating specific models of judicial decision-making, we provide reduced-form evidence on justices' behavior. We then discuss whether the observed (partial) correlations are consistent with prominent theories. Second, to rationalize the novel empirical regularities that we uncover, we propose a model in which justices with different ideological biases trade off the right decision under the law with their concerns over the evolution of precedent. Iaryczower and Shum assume that justices share the common goal of correctly applying the law to a particular case.

In sum, our contribution to the literature on judicial decision-making is threefold. First, we provide new evidence on strategic behavior by Supreme Court justices. Second, our work speaks to justices' preferences. In particular, we present evidence that suggests affecting the evolution of the law is a motivation of theirs. Third, we show that the strategic calculus on the Supreme Court goes far beyond deciding which cases to hear. It extends to the actual resolution of specific disputes, i.e., whether an individual litigant gets justice. The first two of our findings are important because they have direct implications for the assumptions behind prominent theories of the judicial process. The third finding matters because it raises normative concerns about how the Supreme Court makes decisions.

A further consequence of these findings relates to the microfoundations of various theories of judicial decision-making. The main point of departure that gave rise to behavioral approaches to judicial decision-making in the 20th century was a claim that judges are not bound by the law and decide cases in light of their own preferences and little more. This claim serves as a foundation for called "legal realism" and ultimately led to the attitudinal model of Supreme Court decision-making described above. The counterpoint to legal realism is known as "legal formalism," which holds that judges neutrally apply principles of law to cases, mechanically yielding results dictated solely by the letter of the law. Over the past century, these theories of adjudication have become caricatures of idealized versions of judging. However, the core debate—whether judges have preferences about the content of the law or the disposition of cases—remains at the center of the divide between legal academics and social scientists studying the courts (see, e.g., Clark 2019). Our findings engage contemporary work that seeks to unite these perspectives by highlighting one way in which judges' related goals—establishing legal rules and achieving their desired outcomes—jointly shape behavior.

We also contribute to a recently rekindled empirical literature on strategic voting in different environments (see, e.g., Coate and Conlin 2004; Coate et al. 2008; Fujiwara 2011; Kawai and Watanabe 2013; Spenkuch 2015, 2018; Pons and Tricaud 2018). The fundamental difficulty with empirically disentangling expressive and strategic behavior in collective decision-making is that, *ex post*, any cross-section of votes can be rationalized by some “well-behaved” utility function (Degan and Merlo 2009). As a result, extant work either relies on structural modelling or indirect tests. By asking whether agents behave differently when they are actually pivotal, our paper adds to this literature.

In addition, we contribute evidence from an important but underscrutinized institutional setting. Our conclusions are similar to those of Spenkuch et al. (2018), who argue that U.S. senators strategically trade off expressive and instrumental concerns as they vote on bills. Taken together, the evidence from this literature suggests that theories of strategic voting are better descriptions of behavior in small rather than large-scale elections; and even in small elections the canonical pivotal voter model may need to be augmented to account for agents’ non-instrumental motivations.

### 3. Institutional Background

Decision-making at the Supreme Court is characterized by a mix of rigorous institutional rules and a wide range of activity governed by norms rather than formal procedures. Cases typically come to the Court through a process known as a petition for a writ of *certiorari*.<sup>4</sup> Formally, an aggrieved party from a lower court decision asks the Supreme Court to hear the case by filing a brief. The justices evaluate the brief and vote whether to hear the case. While the decision rule is not explicitly specified, there is a strong, well-understood norm that a case will be heard whenever four of the nine justices are in favor of doing so.

After agreeing to hear a case, the Court typically schedules the matter for oral argument. Lawyers for each side file briefs on the merits, as do other interested parties (i.e., *amici curiae*). At oral argument, the lawyers present their cases, usually for 30 minutes, during which time the justices interact with the attorneys as well as each other.

Twice per week, the justices meet “in conference.” At these meetings, they discuss the new cases they have heard and take a straw poll on how to decide them. The decision on how to resolve a new case consists of two elements. First, the justices vote on what is essentially a binary question—whether to reverse or affirm the lower court. This decision determines, for all intents and purposes, which litigant “wins.” Second, and in conjunction, the justices decide on the rationale for the decision, i.e., what the majority opinion will say. Reversing

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<sup>4</sup>There are other mechanisms, but the certiorari process is the one that controls more than 99% of the cases that come to the Court.



a lower-court decision requires a strict majority of votes, and for an opinion to set legal precedent a strict majority of the justices who voted on the case must sign on to it.<sup>5</sup>

More specifically, conference deliberations proceed as follows. The justices go around the table, speaking in order of seniority. The Chief Justice begins, stating what he thinks the relevant legal argument is and who he believes should win. They then continue down the ranks.<sup>6</sup> After the victorious side is established, the most senior justice in the majority assigns responsibility for writing the majority opinion. Other justices may announce their intentions to write concurring or dissenting opinions at this point.

Once opinions begin to be written, drafts are circulated among the justices and their clerks. Individual justices are free to decide which opinions they will join. And they can, for whatever reason, change their preliminary conference votes. Based on the private papers of Justice Brennan, Maltzman et al. (2000) report that vote changes occur in nearly one in five cases.<sup>7</sup> The justices' votes and the outcome of the case, do not become final until they are announced publicly in Court.

Long-held norms of collegiality dictate that Supreme Court justices accommodate each other's requests to change their preliminary votes. It would be highly unusual for the majority to announce a verdict before all members of the Court have agreed that they are satisfied with every aspect of their own decision. In other words, the institutional setting implies that justices' final votes are mutual best responses. Importantly, before votes become final, justices know whether or not they are pivotal, i.e., whether, all else equal, changing their own vote would also change the disposition of the case.

## 4. Data and Econometric Approach

### 4.1. *Data Sources and Descriptive Statistics*

Our empirical analysis draws on the Supreme Court Database, the authoritative resource on all post-WW II cases decided by the Court (Spaeth et al. 2021). Available pieces of information include the identity of the lower court whose decision was reviewed, the parties to the suit, the legal provisions considered in a particular case, and the (final) votes of the justices, among others. Crucial for our purposes, the data also contain expert assessments

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<sup>5</sup>Justices may recuse themselves from a case due to conflicts of interest, but cannot (strategically) abstain.

<sup>6</sup>There is debate in the historical record about the precise order of things. In some accounts, the justices have always spoken and voted in order of seniority (Rehnquist 1987; Perry 1991), whereas according to other accounts, the justices, for some period of time, spoke in order of seniority but then voted in reverse order (Stevens 2011). Today, all accounts agree that the justices speak and vote in order of seniority.

<sup>7</sup>Past scholars have noted that the Chief Justice may have an incentive to initially vote against his true preferences in order to control opinion assignment, and anecdotal accounts suggest that Chief Justice Burger was particularly willing to do so (see Maltzman et al. 2000). In the appendix, we show that our conclusions are qualitatively robust to excluding the votes of the Chief Justice as well as that of the opinion writer (cf. Appendix Tables A.2–A.9).

of the ideological direction of each decision and vote. These assessments are determined by use of a detailed rubric that maps categories of litigants, the substantive issue at hand, and the identity of the winning party into discrete categories for whether the outcome is “conservative,” “liberal,” or, less common, “unspecifiable.”<sup>8</sup> For example, when an employer opposes the government in a case alleging employment discrimination, a disposition in favor of the government (employer) is coded as liberal (conservative). In a case involving protections against warrantless searches by the police, however, a pro-government (individual) vote would be coded as conservative (liberal).

As with most expert assessments, not all experts agree all of the time. For Epstein et al. (2013), Judge Posner personally reviewed a random sample of 110 cases. His coding coincides with that in the Supreme Court Database in 75% of instances. Epstein et al. (2013) propose a revised classification scheme that “corrects” almost all of the discrepancies. In the appendix, we show that using their coding scheme instead has virtually no effect on our findings (cf. Appendix Tables A.10–A.13). In the main text, however, we present results based on the original coding in the Supreme Court Database, which is the one that is typically used in the literature. By using standard data sources and well-worn measures we emphasize that our findings are due to a novel way of looking at the data.<sup>9</sup>

We supplement the Supreme Court Database with Segal–Cover scores as proxies for justices’ ideological leanings *before* being appointed to the Court (Segal and Cover 1989). In the literature on judicial politics, Segal–Cover scores have become the *de facto*-standard measure of justices’ ideology. They are constructed from newspaper editorials that were published in the *New York Times*, *Washington Post*, *Los Angeles Times*, and *Chicago Tribune* between the justice’s nomination by the president and the confirmation vote in the Senate. For each justice, human coders read the editorial, coding every paragraph as either “liberal,” “moderate,” “conservative,” or “not applicable.” Liberal paragraphs, for instance, mention the nominee’s general liberalism, identification with Democratic party leaders or causes, support for women and minorities in equal rights disputes, for defendants in criminal cases, or for individuals in privacy and First Amendment cases against the government. Statements are coded as conservative if they go in the opposite direction, while moderate paragraphs must explicitly ascribe moderation or both liberal and conservative values to the nominee.<sup>10</sup> Excluding statements coded as “not applicable,” Segal and Cover (1989) define a justice’s perceived ideology as the fraction of liberal paragraphs minus the fraction of conservative

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<sup>8</sup>About 1.6% of case outcomes are classified as “unspecifiable.” These disputes are excluded from our analysis.

<sup>9</sup>In the appendix, we also show that our conclusions remain qualitatively unaffected if we implement the sample restrictions recommended by McGuire et al. (2009) (cf. Appendix Tables A.14–A.17).

<sup>10</sup>Segal and Cover (1989) report a high inter-coder reliability ( $\pi = .71$ ,  $p < .001$ ).

**Table 1: Summary Statistics**

Variable	Mean	SD	Min	Median	Max
<i>Term Level (N = 74):</i>					
Number of Cases	119	36	56	119	191
Number of Distinct Justices	9.1	0.3	9.0	9.0	11.0
<i>Justice Level (N = 38):</i>					
Ideology Score	0.463	0.333	0.000	0.417	1.000
Ever Chief Justice	0.132	0.343	0	0	1
Number of Votes	2,007	1,371	118	2,073	5,087
<i>Case Level (N = 8,771):</i>					
Conservative Outcome	0.487	0.500	0	0	1
Unanimous Decision	0.382	0.486	0	0	1
Minimal Majority	0.185	0.389	0	0	1
Number of Justices Voting	8.694	0.611	5	9	9
Issue Area:					
Criminal Procedure	0.231	0.421	0	0	1
Civil Rights	0.165	0.371	0	0	1
First Amendment	0.077	0.267	0	0	1
Due Process	0.040	0.195	0	0	1
Privacy	0.013	0.114	0	0	1
Unions	0.041	0.198	0	0	1
Economic Activity	0.198	0.399	0	0	1
Judicial Power	0.140	0.347	0	0	1
Federalism	0.046	0.210	0	0	1
Federal Taxation	0.036	0.185	0	0	1
Other	0.013	0.112	0	0	1
<i>Vote Level (N = 76,252):</i>					
Conservative Vote	0.472	0.499	0	0	1
Pivotal	0.106	0.307	0	0	1

*Notes:* Entries are descriptive statistics for the most important variables used throughout the analysis. For precise definitions of all variables, see the Data Appendix.

ones. We linearly rescale their index so that a value of zero corresponds to “unanimously liberal,” while a value of one corresponds to “unanimously conservative.”

Despite their simplicity, Segal–Cover scores correlate strongly with the ideological direction of justices’ votes. As can be seen in Figure 1, justices who were thought to be conservatives when they took the bench are, on average, much more likely to cast conservative votes than their more liberal colleagues. Descriptive statistics for the most important remaining variables are presented in Table 1. Overall, we observe 37 different justices deciding more than 8,500 disputes. The median justice in our data votes on more than 1,900 cases. About 40% of cases are resolved unanimously, while 18% end up with a minimal winning coalition. The latter set of cases allows us to shed new light on the nature of justices’ preferences and decision-making in the Court.

## 4.2. Empirical Approach

In the analysis below, we rely on variants of the following regression model:

$$(1) \quad v_{i,c} = \delta \text{Ideology}_i \times \text{pivotal}_{i,c} + \beta \text{pivotal}_{i,c} + \mu_{i,C} + \varepsilon_{i,c},$$

where  $\text{Ideology}_i$  denotes justice  $i$ 's rescaled Segal–Cover score,  $\text{pivotal}_{i,c}$  is an indicator variable equal to one if and only if her vote was pivotal for the disposition of case  $c$ , and  $v_{i,c}$  indicates whether she voted in the conservative (as opposed to the liberal) direction.  $\mu_{i,C}$  is a justice-by-close-case fixed effect, which ensures that all identifying variation comes from within-justice comparisons across the set of close cases ( $C$ ), i.e., cases that were decided a minimal winning coalition. As we explain in Appendix B, this type of comparison is important to control for the unobserved ideological divisiveness of cases and, thus, for providing evidence that is inconsistent with a standard spatial model of voting.<sup>11</sup>

In our most saturated specifications, we additionally interact  $\mu_{i,C}$  with indicator variables for the “natural court” (i.e., the period of time with constant membership on the Court), and the issue area of the case.<sup>12</sup> We also include justice-by-natural-court-by-issue-area fixed effects in order to allow for the possibility that justices’ preferences vary across different areas of the law and over time (Lauderdale and Clark 2012; Martin and Quinn 2002). Our empirical model thus allows for a great deal of flexibility in how individual justices typically decide particular types of disputes.

In the model above, the parameter of interest is  $\delta$ . Given that the ordinary correlation between justices’ ideology and their votes is subsumed in the fixed effect, a positive point estimates implies a stronger correlation when, all else equal, a justice’s choice is decisive for the resolution of the case. To see how  $\delta$  is identified, consider an example. Suppose that, before the Court’s decision is announced, Chief Justice Roberts observes four of his colleagues voting in the conservative direction, while the remaining four vote liberally. He is, therefore, aware that his vote is pivotal. Our linear probability model contrasts Roberts’ final votes on cases in which, *ceteris paribus*, he himself could have changed the disposition of the case with those in similar close cases in which he could not. In other words, we rely on *within*-justice variation in pivotality across narrowly decided cases to estimate changes in the correlation between justices’ ideology and votes.

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<sup>11</sup>In a previous version of this manuscript, we had estimated specifications in which  $\text{pivotal}_{i,c}$  enters the model in eq. (1) directly, i.e., in addition to the interaction term. Since the estimated coefficient on  $\text{pivotal}_{i,c}$  by itself was economically small and statistically indistinguishable from zero, we have followed the suggestion of a referee to omit this term from our workhorse model.

<sup>12</sup>In total, the Supreme Court Database distinguishes between fourteen different issue areas. Examples include, “criminal procedure,” “civil rights,” “First Amendment,” “due process,” and “privacy,” among others.

Note, these comparisons are not limited to the median member of the Court. In a 5–4 split all five justices siding with the majority are pivotal. That is, they find themselves in a position in which they have to best-respond to their colleagues casting four liberal and four conservative votes. If any one of them had voted differently, then, all else equal, the disposition of the case would have been reversed. By contrast, all four justices in the minority know that their own decision is irrelevant for which litigant wins. Further note, whether a particular justice is pivotal is determined by the choices of the *other* members of the Court. There is, therefore, no mechanical relationship between being pivotal and the justice’s own vote.

Before moving on to our descriptive findings, we note that although the example above couches justices’ votes as best responses to those of their colleagues, we do not view  $\delta$  as a structural parameter. Rather, our goal is to present hitherto overlooked patterns in the data. Although these partial correlations do not correspond to particular parameters in some well-specified model of behavior, to the extent that they are (in)consistent with relevant theories, we nonetheless believe that they have the potential to be informative.

## 5. Old Data, New Facts

### 5.1. *Finding I: Ideology is More Strongly Correlated with Pivotal Votes*

Table 2 presents results from estimating variants of eq. (1) on our data. The first column simply replicates the well-known finding that justices’ (perceived) ideology is highly predictive of their votes on the merits of cases. The second column documents a previously unknown fact. The partial correlation between ideology and votes is significantly greater in situations in which a justice is pivotal.

Of course, it may simply be the case that narrowly decided cases are intrinsically more controversial than ones which ended up being clear cut. Since justices cannot be pivotal in cases that were not close, pivotality may be correlated with the unobserved ideological divisiveness of the question at hand. Intuitively, this is the reason for why the basic pattern in Figure 1 and in col. (2) of Table 2 is consistent with both expressive and strategic behavior models of voting (see also Appendix B).

In order to address the issue of unobserved heterogeneity across cases, the third and fourth columns add close-case and justice-by-close-case fixed effects, respectively. As expected, using only within-justice variation across narrowly decided cases shrinks  $\hat{\delta}$  considerably, but does not render it economically small. The remaining columns of Table 2 increase the granularity of the included fixed effects. Once we control for justice-by-close-case fixed effects, however,  $\hat{\delta}$  remains fairly stable. Based on our most saturated specification in column (7), we estimate  $\hat{\delta} = .064$  with a standard error of .031.

**Table 2: Ideology and Pivotality**

	Conservative Vote						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pivotal × Ideology		0.278*** (0.031)	0.278*** (0.031)	0.065** (0.032)	0.077*** (0.030)	0.070** (0.031)	0.064** (0.031)
Ideology	0.330*** (0.013)	0.297*** (0.013)	0.297*** (0.013)				
Pivotal		-0.063** (0.027)	-0.035 (0.034)	0.005 (0.027)	0.006 (0.024)	0.005 (0.025)	0.008 (0.025)
Constant	0.311*** (0.010)	0.317*** (0.010)					
Fixed Effects:							
Close Case	No	No	Yes	No	No	No	No
Justice × Close Case	No	No	No	Yes	No	No	No
Justice × Close Case × Issue Area	No	No	No	No	Yes	Yes	Yes
Justice × Natural Court	No	No	No	No	No	Yes	No
Justice × Natural Court × Issue Area	No	No	No	No	No	No	Yes
R-Squared	0.047	0.053	0.053	0.117	0.175	0.185	0.216
Number of Observations	76,252	76,252	76,252	76,252	76,252	76,252	76,252

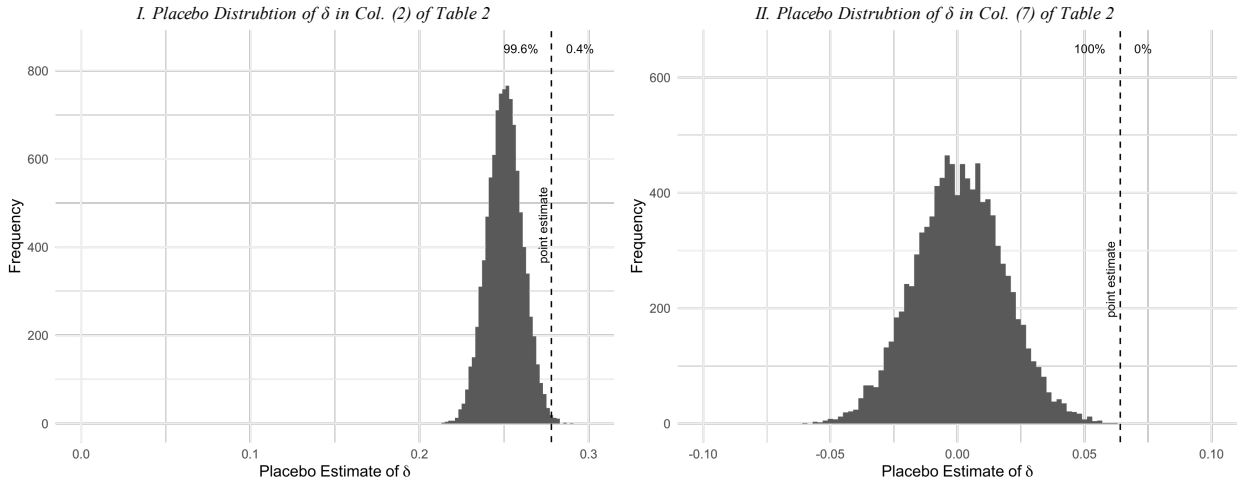
*Notes:* Entries are coefficients and standard errors from estimating variants of the empirical model in equation (1) by OLS. Segal–Cover scores proxy for justices’ ideology, rescaled so that a value of zero (one) corresponds to the most liberal (conservative) justices. “Close Case” refers to cases that were decided by a minimal winning coalition. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Irrespective of the exact specification, we find a stronger correlation between justices’ ideology and votes when they are pivotal. In other words, justices’ votes align even more with their personal views when, all else equal, changing their vote would also change the outcome of the case. In Appendix B, we explicate why the evidence in Table 2 is inconsistent with a canonical median-voter model.<sup>13</sup> Whether the stronger correlation between ideology and pivotal votes can be explained by factors other than strategic voting comes down to bias from either omitted variables or simply misspecification. In our view, the most likely source of omitted variables bias are unobserved case characteristics. To provide evidence that our empirical approach effectively deals with these two potential problems, we turn to randomization inference.

Randomization inference is an empirical “proof by contradiction” technique that allows us to test the sharp null hypothesis of no differences in behavior when pivotal. The intuition is as follows. Suppose that the null hypothesis that the correlation between justices’ votes and ideology does not change when pivotal were, in fact, correct. If so, then randomly reassigning, *within* cases, which (if any) votes happened to be pivotal and re-estimating our workhorse empirical model should yield estimates that are, on average, comparable to those above.

<sup>13</sup>Another way to rule out the median-voter model would be to note that close cases have been decided by many different winning coalitions from among the same set of justices, even when conditioning on issue area. The fourth Roberts Court, for instance, saw seven different coalitions of five versus four justices in civil-rights cases. The median voter model, however, predicts that there exist at most two different winning coalitions. We are grateful to an anonymous referee for pointing this out.

**Figure 2: Within-Case Randomization Inference**

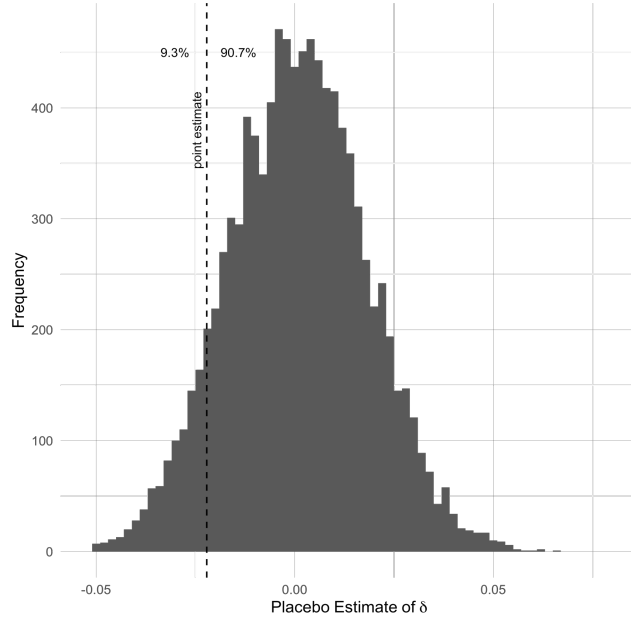


Notes: Figure depicts the distribution of 10,000 placebo estimates  $\delta$ , obtained by randomly reassigning *within* cases which of the justices happened to be pivotal. The estimates in the left panel are based on the specification in column (2) of Table 2, whereas the right panel is based on re-estimating the specification in column (7) on the surrogate datasets. The vertical line in each panel marks the point estimates from the respective columns.

This is because, by construction, randomization within cases holds constant the correlation between the incidence of pivotal votes and any case-specific unobservables. It also replicates the bias that would arise from misspecification. If, however, the estimates in Table 2 are systematically larger than what one should expect under the null, then we can reject it. In addition, if our regression specification appropriately controls for unobserved heterogeneity across cases, then the distribution of placebo coefficients should be approximately centered around zero. Placebo coefficients that are, on average, different from zero would be indicative of either omitted variables bias or bias due to misspecification of our econometric model.

Relying on 10,000 placebo assignments, Figure 2 shows that the true point estimates from Table 2 are greater than what one would expect under the null hypothesis. We can, therefore, reject the claim that our main finding in the previous section is solely due to unobserved case characteristics or model misspecification. The estimates in the left panel are based on the specification in col. (2) of Table 2, which includes *no* controls. Although the distribution of placebo coefficients is not centered around zero—which suggests that this specification does suffer from bias—only 0.4% of placebo estimates are greater (i.e., more extreme) than the corresponding true coefficient. The distribution in the right panel is based on the specification in col. (7) of Table 2, which includes the full set of controls. Again, the true point estimate is greater than can be reasonably expected under the null, and, importantly, including the full set of controls centers the placebo coefficients around zero. The comparison of both panels thus suggests that our fixed effects approach effectively deals with unobserved case-specific confounds.

**Figure 3: Within-Case Randomization Inference for Hypothetical 2/3-Majority Requirement**



*Notes:* Figure depicts the distribution of 10,000 placebo estimates for  $\delta$  under the assumption that overturning a lower court's ruling requires a 2/3 rather than a simple majority. As in Figure 2, placebo estimates are constructed by randomly reassigning within cases that saw a minimal winning coalition (assuming a 2/3-majority requirement) which of the justices happened to be pivotal. We then estimate a model analogous to that in col. (7) of Table 2, interacting all with effects the disposition direction of the lower court. The vertical lines mark the actual point estimate.

Another way to provide evidence against non-strategic theories as well as an array of mechanical explanations for our Finding I is to consider a hypothetical two-thirds majority requirement for determining whether a justice was pivotal. If justices do, indeed, vote strategically, then there should be no comparable effect of being pivotal at the fake threshold. If, however, the finding in Table 2 is spurious then we would expect to observe that the votes of justices are more strongly correlated with their ideology when they are “pivotal” under a 6–3 threshold than when they are not.

Figure 3 shows that such a prediction is inconsistent with the data. Interacting our fixed effects with indicators for the ideological direction of the lower court’s ruling and estimating the resulting model on data imposing the hypothetical threshold yields a (“wrongly signed”) point estimate of  $\delta = -.022$  with a standard error equal to .031; and randomization inference produces a two-sided  $p$ -value of 20.4%, which confirms that this result unremarkable relative to the distribution of coefficients that one would expect under the null of no relationship between being “pivotal” in 6–3 decisions and justices’ votes.



## 5.2. *Finding II: Justices Behave Differently when They Can Make New Law*

An important point of disagreement between scholars studying the judicial process is whether judges and justices care only about the outcome of a particular case or whether they are (also) interested in shaping future jurisprudence. For instance, the literature concerned with the evolution and efficiency of common law tends to model judges as forward-looking decision-makers whose primary motivation is to shape precedent (see, e.g., Gennaioli and Shleifer 2007; Ponzetto and Fernandez 2008; Baker and Mezzetti 2012; Callander and Clark 2017). By contrast, the attitudinal model assumes that judges care about how the case before them is decided, i.e., which litigant wins, rather than the content of the law they create (see, e.g., Segal and Spaeth 2002). In the remainder of this section, we present a related, overlooked pattern in the data that has the potential to shed light on this issue.

In the context of the U.S. Supreme Court, it is useful to recall that for an opinion to unambiguously set precedent, a (strict) majority of the justices participating in the case must sign on to it. A justice who agrees with the majority’s preferred outcome but not the legal reasoning in its opinion may vote with the majority on the merits of the case but issue a *special* concurrence, i.e., write a separate opinion outlining a different legal argument or standard. If no opinion enjoys the support of a majority of justices, then it falls upon the lower courts to determine whether precedent can be deduced according to the *Marks* Rule. This rule states that the precedent from a case in which there is only a plurality opinion can be understood to be the narrowest grounds for deciding the case on which a majority agrees. The *Marks* Rule is in tension with the common law principle that a precedent cannot be set without a majority of the Court; and what the “narrowest grounds” actually are is in reality often unclear. As a result, lower courts have frequently failed, or even refused, to properly implement the Rule.<sup>14</sup> The consequence is that precedent is only unambiguously set by an opinion that is backed by a majority of the justices (including *regular* concurring opinions).

Hence, there are situations in which a justice observes that five of her colleagues agree on the correct disposition, but only four are willing to endorse the legal reasoning in the majority opinion. Such a justice is pivotal with respect to setting clear precedent but not with respect to the outcome of the case. Although 94% of the time justices are either pivotal on both dimensions or neither, the respective events are conceptually distinct. In total, our data contain 3,680 instances in which a justice was only pivotal for the majority opinion unambiguously constituting precedent, and 870 in which her choice determined only the final disposition (but not whether any opinion receives majority support). The latter can, for instance, arise if four of a justice’s colleagues favored a particular ruling, yet no opinion

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<sup>14</sup>As recently as 2018, the Supreme Court has declined to resolve the question of how to determine the “narrowest grounds” (cf. *Hughes v. United States*)

**Table 3: Precedent vs Case Disposition**

<i>A. Vote on the Merits</i>						
	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Ideology × Pivotal for Disposition	0.077*** (0.030)	0.064** (0.031)			-0.011 (0.041)	-0.015 (0.042)
Pivotal for Disposition	0.006 (0.024)	0.008 (0.025)			0.034 (0.033)	0.033 (0.033)
Ideology × Pivotal for Precedent			0.097*** (0.019)	0.085*** (0.019)	0.103*** (0.026)	0.093*** (0.026)
Pivotal for Precedent			-0.018 (0.016)	-0.014 (0.016)	-0.032 (0.022)	-0.029 (0.022)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.175	0.216	0.175	0.216	0.175	0.217
Number of Observations	76,252	76,252	76,252	76,252	76,252	76,252
<i>B. Disagreement with Majority Opinion</i>						
	Issue Special Concurrence					
	(7)	(8)	(9)	(10)	(11)	(12)
Pivotal for Disposition	0.035*** (0.004)	0.038*** (0.004)			0.097*** (0.008)	0.099*** (0.008)
Pivotal for Precedent			-0.030*** (0.004)	-0.028*** (0.004)	-0.071*** (0.007)	-0.070*** (0.007)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.032	0.070	0.032	0.070	0.038	0.076
Number of Observations	76,252	76,252	76,252	76,252	76,252	76,252

*Notes:* Entries are coefficients and standard errors that differentiate between whether a justice was pivotal for the disposition of the case or for the majority opinion setting legal precedent, as explained in the text. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

enjoys the support of more than three other justices. To exploit this variation, we code justices as pivotal for precedent if and only if their endorsement is needed for the majority opinion to reach the threshold to unambiguously set precedent (i.e., five out of nine justices joining the opinion or issuing a *regular* as opposed to a *special* concurrence). We then run a “horse race” between both pivotality events.

Table 3 presents the results. The estimates in the upper panel replicate columns (5) and (7) of the previous table but distinguish between justices being pivotal for the case disposition and being pivotal for setting unambiguous precedent. Without conditioning on the other, either pivotality event coincides with a stronger correlation between justices’ ideology and their votes. When we include both in the same regression model, however, only being pivotal for whether the majority opinion enjoys enough support to clearly constitute precedent appears to matter for justices’ decisions.

If it is, indeed, the case that justices care about affecting legal precedent, then we would also expect them to write fewer special concurrences when presented with the opportunity to unambiguously make new law. That is, when they are pivotal for setting clear precedent,

justices should become less likely to simultaneously agree with the majority on the merits of the case but disavow its legal reasoning. By contrast, in situations in which their choice only matters for the case disposition, pivotal justices can express different legal views at lower cost. They should thus become weakly more likely to issue a special concurrence.<sup>15</sup>

The results in the lower panel of Table 3 are consistent with this intuition. Justices are *more* likely to write special concurrences when they are pivotal for the case disposition; but they issue *fewer* of them when doing so would prevent the majority opinion from reaching the threshold to unambiguously constitute precedent. Taken together, the evidence in Table 3 suggests that Supreme Court justices behave differently when their choices matter for precedent.

## 6. A Model of Decision-Making in the Court

Extant theories of judicial decision-making in which judges decide cases based on affinities for certain litigants cannot readily explain why ideology is more predictive of justices' choices when they are pivotal. The same is true for theories according to which judges always apply their preferred legal rules. In what follows, we build on the model in Spenkuch et al. (2018) to develop a simple theory of voting at the Supreme Court that *is* consistent with the data. The main purpose of our model is to provide a theoretical lens to help interpret the findings above. We are by no means implying that ours is the only potential explanation for Findings I and II. The key difference between existing work and ours is that, in our model, justices have both expressive and instrumental preferences. When both are at odds, then justices can have an incentive to vote strategically—even though votes are binary, which usually precludes strategic behavior.

### 6.1. Model Primitives

**Players, Actions, and the Legal Environment.** There is an odd number of Supreme Court justices, indexed by  $i = 1, 2, \dots, N$ , who collectively decide the disposition of the case at hand,  $d \in \{0, 1\}$ , where  $d = 1$  corresponds to a conservative disposition. Each justice can either cast a conservative vote,  $v_i = 1$ , or a liberal one,  $v_i = 0$ . Cases are decided by majority rule, so that  $d = 1$  if and only if  $\sum_{i=1}^N v_i \geq \frac{N+1}{2}$ .

A case is comprised of a combination of legal and conceptual facts. For simplicity, we assume that these facts can be summarized by a unidimensional index over the unit interval,  $x$ , with higher values favoring a liberal decision. Since all justices have access to the same

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<sup>15</sup>Note, a justice who is pivotal with respect to the case outcome is almost mechanically part of the majority coalition. To make it known that she disagrees with the majority opinion, she must issue a special concurrence rather than a dissent. The latter are, by definition, written by members of the minority.

case-related background information, receive the same set of legal briefs, and hear the same oral arguments, we impose the assumption that  $x$  is common knowledge.

In addition to the legal facts, each case is decided in light of an existing body of law. Let  $Q$  denote the legal status quo or precedent. A status quo of  $Q$  implies that, under an objective reading of current law, all cases with facts  $x \geq Q$  should be decided liberally, whereas cases with facts  $x < Q$  ought to be decided conservatively.<sup>16</sup> Since a higher threshold results in conservative decisions for a wider range of case facts, we interpret  $Q$  as the conservativeness of current precedent. For example, in a search and seizure case,  $x$  might represent the degree of intrusiveness of the search, while  $Q$  demarcates what constitutes permissible police conduct. If  $x \geq Q$ , then the police overstepped its authority and the evidence obtained from the search should have been excluded at trial.

***Evolution of Precedent.*** There are two forces in our model that might lead justices to disagree about the appropriate ruling. (i) Justices may have different legal philosophies, i.e., they differ in their reading of current law and, therefore, in their perception of  $Q$ . (ii) Some may also find the legal status quo undesirable, which causes them to seek new precedent.

Let  $P$  be the precedent that results from the Supreme Court's ruling on the case. If the Court's decision accords with the status quo (i.e.,  $d = 1 \Leftrightarrow x < Q$ ), then the precedent remains unchanged, so that  $P = Q$ . If, however, the disposition is inconsistent with the extant body of law (i.e., if  $x \geq Q$  and  $d = 1$ , or  $x < Q$  and  $d = 0$ ), then the case at hand sets a new precedent, and  $P = x$ .<sup>17</sup>

***Preferences.*** Motivated by Finding II, we assume that justices have instrumental preferences over  $P$ , as this affects the resolution of similar disputes that subsequently come before lower courts. At the same time, justices also care about their vote on the merits of the case at hand. In particular, a justice derives expressive utility from her own vote being consistent with her reading of the law. These expressive preferences may be due to an unmodeled concern for her personal reputation, concerns about the legitimacy of the Court, concerns related to collegiality, or an intrinsic motivation to honor the role of judges as neutral umpires and appliers of the law.

Whatever the ultimate source of justices' preferences, in order to rationalize the data, we let both their expressive as well as their instrumental inclinations depend on their ideology. That is, a justice's personal views may not only affect the ideal legal rule by which she would like future cases to be resolved, but her ideology might also color her interpretation of existing law or, more generally, her judicial philosophy. As a consequence, justices disagree

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<sup>16</sup>The decision to break ties in favor of a liberal decision has no bearing on our results.

<sup>17</sup>This simplified rule for how precedent evolves is imposed for tractability and ease of exposition. If we are considering cut-off rules, then our results are robust to any precedent rule that updates towards the case facts more when the court's ruling is inconsistent with precedent than when a ruling is consistent.

as *policy makers* over where the ideal legal rule should lie; and they may disagree as *umpires* over how to interpret the extant set of rules.

Formally, each justice has an indifference point,  $J_i$ , which represents her preferred delimitation between conservative and liberal decisions. Since justice  $i$  favors  $d = 1$  if and only if  $x < J_i$ , a higher  $J_i$  is associated with a more conservative outlook.

To capture the dependence between a justice's ideology and her interpretation of the law, we let the latter be given by  $q_i \equiv q(Q, J_i)$ , with (i)  $q(Q, Q) = Q$ , (ii)  $0 < \frac{\partial q}{\partial Q} \leq 1$ , and (iii)  $0 < \frac{\partial q}{\partial J_i} \leq 1$ . Intuitively, the first of these assumptions states that a justice whose ideal legal rule coincides with current precedent reads the law correctly. The second assumption ensures that justices' perception of the legal status quo correlates with reality, and the third assumption allows for a systematic ideological bias. That is, a conservative justice interprets the law as more conservative than a more-liberal one.<sup>18</sup>

Justices' instrumental payoffs depend on their ideal legal rule, their own vote, as well as the votes of their colleagues. The latter two matter because they determine the Court's ruling and, therefore,  $P$ . Specifically, we assume that a justice's instrumental aims are served when the new precedent more-closely aligns with her preferred rule, as in

$$D_i(v_i, v_{-i}) = -|P(v_i, v_{-i}) - J_i|.$$

By contrast, her expressive payoff depends on her own vote as well as how the facts of the case relate to her interpretation of *current* precedent:

$$E_i(v_i) = \left(\frac{1}{2} - v_i\right)(x - q(Q, J_i)).$$

In words, a justice derives positive expressive utility from casting a liberal vote if and only if she perceives the case facts to lie to the right of the status quo.

Combining both types of concerns, and assuming that justices put weight  $\gamma$  on their instrumental motives, total utility is given by

$$U(v_i, v_{-i}) = (1 - \gamma)E_i(v_i) + \gamma D_i(v_i, v_{-i}).$$

***Discussion of Preferences.*** Our characterization of justices' preferences reflects the competing roles they are asked to play. On one hand, all judges are arbiters of rules. On the other hand, common law judges have the power to set new precedent. They are thus also

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<sup>18</sup>The requirement that the derivatives of  $q$  do not exceed one ensures that  $q_i$  falls between  $Q$  and  $J_i$ . That is, a justice interprets the law with a self-serving bias, but she does not "overshoot." The latter helps to guarantee the existence of a pure-strategy equilibrium. In general, our assumptions on  $q$  are sufficient but not necessary to rationalize the empirical results in the previous section.

policymakers; and our empirical results suggest that they behave differently when presented with the opportunity to affect precedent.

When justices are not pivotal, they cannot directly influence the legal status quo. Absent the temptation to affect policy, they act as arbiters of the law—even if they interpret the law through an ideologically shaded lens. Hence, when not pivotal, judges decide based on their preferences over the correct application of current legal rules. Since these preferences do not depend on the ultimate outcome of the case, we call them expressive; although they may be better described as simply non-instrumental.

Conversely, when pivotal, a justice faces her two roles of arbiter and policymaker simultaneously and must trade off the potentially competing interests of both. Confronted with the opportunity to influence the legal status quo, a justice’s pure policy preferences become relevant to her decision. Since they do depend on the resolution of the case, we refer to these concerns as instrumental.

Our characterization of justices’ expressive and instrumental concerns contrasts with the common view that judges reveal their preferences over policy when they dissent. We believe that our assumptions are justified on two grounds. First, they are motivated by and compatible with our main empirical finding. Second, our assumptions are guided by the institutional setting and the realities of when the justices can, in fact, influence policy. A judge can only affect the resolution of a case when she is pivotal. Her desire to set new legal precedent should, therefore, weigh more heavily for pivotal votes.

In our view, whatever judges do reveal in their dissents need not be their true policy preference. For instance, it is possible that judges use minority opinions as an opportunity to pander to different audiences. A pandering model of opinion writing would be consistent with the findings in this paper provided that justices’ *votes* continue to be governed by the basic trade-off between instrumental and non-instrumental concerns that we outline above.

Another interpretation of our instrumental preferences is that they are a stand-in for future concerns that might arise as a result of changes in precedent. These dynamic concerns could include influencing judicial behavior in lower courts, changing the behavior of non-judicial agents who might adjust their behavior to accord with changes in the law as interpreted by courts. In recent work that directly builds on our approach, Bagwe (2021) develops a dynamic variant of our model where justices care about changes in precedent as it allows them to make decisions more consistent with their view of the law in the future.

## 6.2. *Strategies, Equilibrium, and Testable Implications*

To solve the model, we assume that justices’ actions constitute a Nash equilibrium. We focus on Nash equilibria because long-held norms of collegiality dictate that Supreme Court

justices accommodate each other's requests to change their (initial) votes. In other words, the institutional setting suggests that justices' final votes are mutual best responses.

Since justice  $i$  observes  $v_{-i}$ , she knows whether her vote is pivotal. If her decision is irrelevant for the outcome of the case (and thus  $P$ ), her calculus of voting is straightforward. Comparing the utility from casting a conservative vote to that from a liberal one, her decision rule reduces to a consideration of her expressive preferences. It is, therefore, optimal to vote conservatively if and only if she interprets current precedent to warrant a conservative decision.

If justice  $i$  knows that she is pivotal, then her calculus of voting becomes more complicated because there may be situations in which her expressive and instrumental preferences conflict. For example, a conservative justice might know that the law demands a liberal vote. At the same time, she may find the current status quo so objectionable that she is willing to incur expressive disutility in order to set new precedent further to the right.

Proposition 1 formalizes these intuitions.

**PROPOSITION 1:** *Consider a generic case with facts  $x$ . If justice  $i$  is not pivotal, i.e., if  $\sum_{j \neq i} v_j \neq \frac{N+1}{2} - 1$ , then she casts a conservative vote whenever  $x < q_i$ . If justice  $i$  is pivotal and*

- (i) *if  $\gamma < \frac{q_i - J_i}{Q + q_i - 2J_i}$ , then she votes conservatively if and only if  $x < \frac{q_i - \gamma(Q + q_i)}{1 - 2\gamma}$ ,*
- (ii) *if  $\gamma \geq \frac{q_i - J_i}{Q + q_i - 2J_i}$ , then she votes conservatively if and only if  $x < \gamma(2J_i - Q) + (1 - \gamma)q_i$ .*

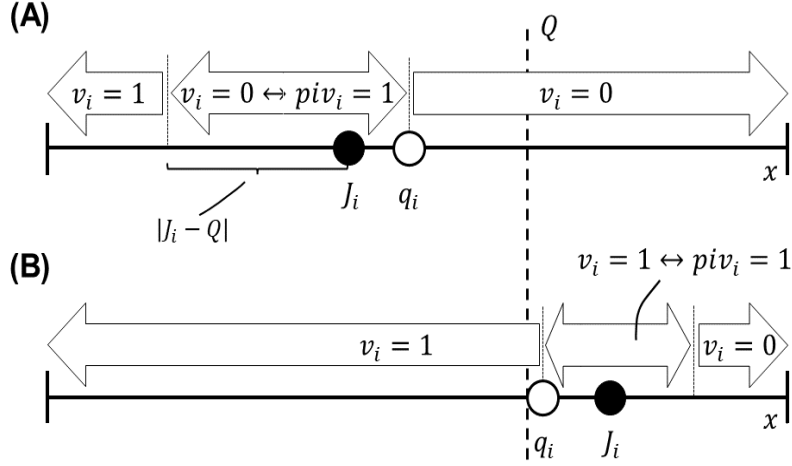
**PROOF:** All proofs are collected in Appendix A.

*Q.E.D.*

To better convey the nature of justices' strategies, Figure 4 illustrates how their optimal decisions depend on the case facts as  $\gamma \rightarrow 1$ . In this special case, pivotal justices base their votes (solely) on their instrumental preferences. Smaller  $\gamma$  yield qualitatively identical rules, but with different cutoffs. Importantly, the cutoffs depend continuously on  $\gamma$  and the remaining model parameters.

The upper panel of Figure 4 considers a justice whose ideal legal rule is considerably more liberal than current precedent, while the lower one depicts the decision rule of a justice who is slightly more conservative than the status quo. As indicated by the labelled arrows, both would always vote liberally (conservatively) when the facts lie far enough to the right (left). For intermediate ranges, however, their decisions differ. Since the liberal justice's perception of the legal status quo is further to the left than that of the conservative one, she votes liberally on a larger set of cases than the latter, even when neither is pivotal. As a result, our model predicts that:

**Figure 4: Justices' Decision Rule as  $\gamma \rightarrow 1$**



*Notes:* Figure shows the set of case facts ( $x$ ) for which justices would vote liberally ( $v=0$ ) or conservatively ( $v=1$ ) as  $\gamma \rightarrow 1$ . For a general characterization of justices' decision rule, see Proposition 1.

IMPLICATION 1: *A justice's vote correlates with her ideology, irrespective of whether she is pivotal.*

The figure also makes clear that, as long as the case facts are not too far removed from the legal status quo, pivotal justices are willing to deviate from their role as umpire in order to more-closely align the new precedent with their ideal rule. As a result, when pivotal, justices vote in the direction of their ideological predisposition for a wider range of  $x$ . Moreover, the further away a justice's ideal point is from the status quo, the larger is the interval of case facts for which her decision depends on being pivotal. Intuitively, an ideal rule that is far removed from current precedent implies a larger set of facts that, if  $P = x$ , would improve upon the status quo. We, therefore, obtain an additional empirical implications.

IMPLICATION 2: *If a justice is pivotal, then ideology exerts an even greater influence on her decision than usual.*

Before we formally characterize the game's equilibria, it is useful to introduce some additional notation. Let  $\bar{x}_i(\gamma)$  be the conservative-voting threshold that Proposition 1 prescribes for justice  $i$  when she is pivotal.<sup>19</sup> Further, let  $L \equiv \{i : x \geq \max\{q_i, \bar{x}_i(\gamma)\}\}$  and  $C \equiv \{i : x < \min\{q_i, \bar{x}_i(\gamma)\}\}$  denote the sets of *unconflicted* agents, i.e., justices who vote either liberally or conservatively regardless of the choices of their colleagues; and define  $\tilde{L} \equiv \{i : \bar{x}_i(\gamma) \leq x < q_i\}$  and  $\tilde{C} \equiv \{i : q_i \leq x < \bar{x}_i(\gamma)\}$  as the group of justices who do so if, and only if, their vote is pivotal. We say that these justices are *conflicted*. Lastly, let

<sup>19</sup>Specifically,  $\bar{x}_i(\gamma) \equiv \frac{q_i - \gamma(Q + q_i)}{1 - 2\gamma}$  if  $\gamma < \frac{q_i - J_i}{Q + q_i - 2J_i}$ , and  $\bar{x}_i(\gamma) \equiv \gamma(2J_i - Q) + (1 - \gamma)q_i$  if  $\gamma \geq \frac{q_i - J_i}{Q + q_i - 2J_i}$ .



$\#\cdot$  denote the cardinality of the respective set. With this notation in hand, we can state a useful lemma.

LEMMA 1: *For a generic arrangement of legal status quo, case facts, and preferences, there exists at most one type of conflicted justice. That is, either (i)  $\#\tilde{C} = \#\tilde{L} = 0$ , (ii)  $\#\tilde{C} = 0$  and  $\#\tilde{L} \geq 1$ , or (iii)  $\#\tilde{C} \geq 1$  and  $\#\tilde{L} = 0$ .*

The intuition behind the lemma is simple. Given the self-serving bias with which justices interpret the law, it cannot be the case that a conservative justice (i.e., a member of the Court who would like to set precedent further to the right) perceives that the law demands a liberal decision while a more-liberal colleague of hers believes the opposite. A technical consequence of this is that the game above always admits an equilibrium in pure strategies.

PROPOSITION 2: *For a generic arrangement of legal status quo, case facts, and preferences, there always exists at least one pure-strategy Nash equilibrium. In any equilibrium, all unconflicted justices vote their expressive preferences. Further,*

- (i) *if  $\max\{\#C, \#L\} \geq \frac{N+1}{2}$ , then all conflicted justices vote according to their expressive preferences. The resulting equilibrium is unique, and  $d = 1 \Leftrightarrow \#C \geq \frac{N+1}{2}$ .*
- (ii) *if either  $\#C = \frac{N+1}{2} - 1$  and  $\#\tilde{C} \geq 1$ , or  $\#L = \frac{N+1}{2} - 1$  and  $\#\tilde{L} \geq 1$ , then exactly one of the conflicted justices votes against her expressive preferences. The resulting equilibria are outcome-equivalent insofar as  $d = 1 \Leftrightarrow \#C + \#\tilde{C} \geq \frac{N+1}{2}$ .*
- (iii) *if  $\max\{\#C, \#L\} < \frac{N+1}{2}$  and either  $\#C < \frac{N+1}{2} - 1$  and  $\#\tilde{C} \geq 2$ , or  $\#L < \frac{N+1}{2} - 1$  and  $\#\tilde{L} \geq 2$ , then there exist multiple equilibria with different outcomes:*
  - (a) *Exactly  $\frac{N+1}{2} - \#C$  ( $\frac{N+1}{2} - \#L$ ) of the conflicted justices vote against their expressive preferences and  $d = 1$  ( $d = 0$ ).*
  - (b) *All conflicted justices vote according to their expressive preferences, so that  $d = 0$  ( $d = 1$ ) even if  $\#C + \#\tilde{C} \geq \frac{N+1}{2}$  ( $\#L + \#\tilde{L} \geq \frac{N+1}{2}$ ).*

In words, part (i) of the proposition states that, whenever a majority of unconflicted justices agrees on the correct ruling, all members of the Court vote according to their own interpretation of the law. Parts (ii) and (iii) consider situations in which the Court lacks a clear-cut majority of unconflicted justices. In these cases, instrumental considerations may induce some justices to vote strategically in order to affect precedent. Interestingly, there is also the potential for coordination failures. In the equilibrium in (iii)(b), the Court's ideological *minority* prevails because the conflicted members of the majority faction all vote according to their interpretation of current law.<sup>20</sup> We further observe that, with exception

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<sup>20</sup>Note, normal refinements such as a restriction to weakly undominated strategies do not apply here. When a justice is not pivotal, she strictly prefers to vote according to her expressive preferences.

of (iii)(b), all equilibria in Proposition 2 are coalition-proof. That is, it is not possible for some subset of them to improve their payoffs by *jointly* deviating.

## 7. Alternative Explanations

We now turn to potential alternative explanations for why justices' ideology plays a greater role in how they vote on the merits of cases when they are pivotal.

***Legalistic Uncertainty.*** Epstein et al. (2013) and Posner (2016) argue that many cases that the Court agrees to hear are ambiguous on legalistic grounds; yet somehow a decision has to be reached. When the law is unclear, and in light of the lack of rigorous rules on which justices could rely to navigate gray areas, they cannot help but fall back on their personal experiences and intuitions, which are often flavored with ideology. According to this and similar accounts of the Court, justices would like to call the balls and strikes, but because of imprecision in what distinguishes a ball from a strike, their ideological predispositions wind up shaping how they exercise discretion.

For such a theory to explain why justices who are pivotal put more weight on ideology than they would otherwise, it must be that being pivotal is associated with greater uncertainty about the correct disposition under the law. As in Iaryczower and Shum (2012), justices may look to the decisions of others for cues about the appropriate ruling. Almost by definition, a justice whose vote is pivotal has obtained the same number of liberal and conservative signals from the actions of her colleagues, whereas a justice whose vote is irrelevant for the outcome of the case has observed strictly more signals of one kind than of the other. It is, therefore, plausible that casting the pivotal vote goes hand in hand with greater legalistic uncertainty. If an uncertainty-based explanation is correct, then pivotal justices should polarize more the higher the degree of legalistic uncertainty.

A first piece of evidence against this type explanation comes from the results in Table 3. If it is uncertainty about the correct case disposition that drives justices' behavior, then it is not clear why justices who are pivotal for unambiguously setting precedent become *more* likely than usual to sign the majority opinion, whereas justices who are pivotal for the disposition become *less* likely to do so. It is also not immediately obvious why justices would react more to being decisive for precedent than for the outcome of the case itself. In addition, an explanation based on uncertainty about the correct ruling in a given case would need to be amended in order to rationalize why the effect of pivotality is greater for ideologically more extreme justices (cf. Appendix Table A.1).

These issues notwithstanding, we now ask whether justices who are decisive for the outcome of the case are especially reliant on ideology when legalistic uncertainty is high. To this end, we differentiate between cases in which the lower court whose decision is being reviewed

**Table 4: Comparative Statics by Legalistic Uncertainty**

	Conservative Vote			
	(1)	(2)	(3)	(4)
Ideology × Pivotal for Precedent	0.101***	0.100***		
× Dissent in Lower Court	(0.037)	(0.035)		
Ideology × Pivotal for Precedent	0.097***	0.083***		
× Unanimous Vote in Lower Court	(0.022)	(0.023)		
Pivotal for Disposition	-0.025	-0.032		
× Dissent in Lower Court	(0.029)	(0.027)		
Pivotal for Disposition	-0.016	-0.010		
× Unanimous Vote in Lower Court	(0.017)	(0.018)		
Ideology × Pivotal for Precedent			0.067	0.067
× Conflict among Lower Courts			(0.044)	(0.045)
Ideology × Pivotal for Precedent			0.106***	0.091***
× No Conflict among Lower Courts			(0.019)	(0.020)
Pivotal for Disposition			-0.018	-0.015
× Conflict among Lower Courts			(0.036)	(0.038)
Pivotal for Disposition			-0.018	-0.014
× No Conflict among Lower Courts			(0.016)	(0.016)
H <sub>0</sub> : Equal Coefficients [p-value]	0.930	0.692	0.382	0.597
Fixed Effects:				
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes
R-Squared	0.175	0.216	0.175	0.216
<b>Number of Observations</b>	<b>76,234</b>	<b>76,234</b>	<b>76,252</b>	<b>76,252</b>

*Notes:* Entries are coefficients and standard errors on  $\delta$  in equation (1), which is allowed to vary based on whether the judges on the lower court deciding the same case were split (columns (1) and (2)), and whether different lower courts had previously issued contradictory rulings on the same legal question (columns (3) and (4)). All hypothesis tests are tests of the null equal coefficients across the respective settings. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

issued a unanimous verdict and those in which the panel of lower-court judges was split. If legalistic uncertainty causes Supreme Court justices to fall back on their ideology as they decide individual cases, then we would expect a greater effect in the latter set of disputes. Second, we turn to legal issues on which different lower courts issued conflicting verdicts. Again, if legalistic uncertainty drives our main result, then we would expect a significantly greater impact of pivotality in cases that resolved circuit splits than in those that did not.

The results in Table 4 show that these predictions are not borne out in the data. We note, however, that both of our proxies for legalistic uncertainty operate at the case level. They are less likely to capture subjective legal uncertainty due to, say, private information.

**Majority Effects.** To make it clear that our descriptive findings are unlikely to be driven by having voted with the majority, we point to the results in Figure 3. If having voted with the majority is driving our results, then we would expect to find a similar pattern of being “pivotal” under 6—3 majority threshold. This, however, is not the case. It is also not obvious

why some kind of majority or bandwagon effect would load more heavily on being decisive for precedent than on being pivotal for the outcome of the case itself (cf. Table 3), and why casting the pivotal vote is more important for the decisions of ideologically more extreme justices (cf. Appendix Table A.1).

## 8. Concluding Remarks

“[W]hen judges engage in legal interpretation, they often change the existing set of rules so extensively it would be misleading to say that they are not making new law” (Epstein and Knight 1998, p. 183). In this paper, we present previously overlooked patterns in the data, which suggest that aligning the law with their personal ideology is a key motivation of Supreme Court justices. We arrive at this conclusion by differentiating between situations in which, all else equal, a justice’s vote is decisive for the outcome of the case and those in which it is not. Our primary empirical finding is that if a justice is pivotal, ideology plays an even greater role than usual in determining her choice, especially when this choice matters for unambiguously establishing new precedent. We argue that the justices cast strategic votes on the merits of cases, at least in part, due to instrumental considerations.

An notable limitation of our analysis is that we have little to say about the Court’s opinion. Absent reliable text-analytic measures of opinion content, we confine ourselves to showing that, when a justice is decisive for whether the majority opinion sets clear precedent, she becomes significantly less likely to officially disagree with it. Carefully measuring the impact of strategic behavior on the content of Supreme Court opinions remains a high-priority objective for future research.

Nonetheless, the results above have potentially important implications for our understanding of judicial decision-making in general and the Supreme Court in particular. In times of high political polarization and Congressional gridlock, the prospects for passing constitutional amendments and other landmark legislation are slim to none. It, therefore, often falls on the federal courts to make new law. While previous scholars have noted that the Supreme Court can focus on developing certain areas of the law through the strategic selection of cases (see, e.g., Callander and Clark 2017), our analysis suggests that justices’ strategic calculus goes beyond deciding which cases to hear. It extends to the actual resolution of specific disputes and, therefore, which litigants get justice.

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# Online Appendix to “Politics from the Bench? Ideology and Strategic Voting in the U.S. Supreme Court”

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## Appendix A: Proofs

PROOF OF PROPOSITION 1:

*Case A: Justice is not pivotal*

If justice  $i$  casts a liberal vote ( $v_i = 0$ ) she gets utility  $U_i(0, v_{-i}) = (1 - \gamma)E_i(0) + \gamma D_i(0, v_{-i})$  and if she casts a conservative vote ( $v_i = 1$ ) she gets utility  $U_i(1, v_{-i}) = (1 - \gamma)E_i(1) + \gamma D_i(1, v_{-i})$ . She strictly prefers to vote conservative if and only if  $U_i(1, v_{-i}) > U_i(0, v_{-i})$ . Since she is not pivotal and  $D_i(0, v_{-i}) = D_i(1, v_{-i})$ , she votes conservative if and only if  $(1 - \gamma)E_i(1) > (1 - \gamma)E_i(0)$  or  $(-\frac{1}{2})(x - q_i) > (\frac{1}{2})(x - q_i)$ , which is equivalent to  $x < q_i$ . Given our assumption on breaking indifference towards voting liberal, this condition is necessary and sufficient, as required.

*Case B: Justice is pivotal*

We will consider the justices' decision rule in five cases. We begin by considering two simple cases in which there is no conflict between a justice's expressive and instrumental preferences. These cases occur when the case facts sufficiently favor a liberal or conservative disposition relative to the status quo and the justice's ideal rule. For what follows, we assume that  $J_i < Q$ , the analogous case follows the exact same reasoning.

*Case B-i:  $x \geq Q$*

Because  $x \geq Q$ , a liberal disposition is consistent with the status quo and thus  $P(0) = Q$  and  $P(1) = x$ . Instrumentally, a conservative vote results in a precedent weakly further from the justice's ideal rule. In symbols,  $|x - J_i| \geq |Q - J_i|$ , since  $J_i < Q$ . Similarly, a conservative vote also results in a strict expressive loss as  $q_i \in (J_i, Q)$ , which implies  $x > q_i$ . Since the justice strictly prefers a liberal vote on the expressive dimension and weakly prefers a liberal vote on the instrumental dimension, she votes liberal whenever  $x \geq Q$ .

*Case B-ii:  $x < 2J_i - Q$*

Note that  $2J_i - Q = J_i - (Q - J_i) < Q$  since  $J < Q$ . Therefore,  $x < 2J_i - Q$  implies  $x < Q$ , which means that a conservative disposition is consistent with the status quo and  $P(1) = Q$  and  $P(0) = x$ . Instrumentally, a liberal vote results in a precedent strictly further from the justice's ideal rule because  $|x - J_i| > |(2J_i - Q) - J_i| = |Q - J_i|$ . Similarly, a liberal vote also results in a strict expressive loss since  $q_i \in (J_i, Q)$ , which implies  $x < q_i$ . Since the justice strictly prefers a conservative vote on the expressive and instrumental dimensions, she votes conservative whenever  $x < 2J_i - Q$ .

*Case B-iii:  $x \in [q_i, Q)$*

Because  $x \leq Q$ , a conservative disposition is consistent with the status quo and  $P(1) = Q$

and  $P(0) = x$ . Instrumentally, a liberal vote results in a precedent strictly closer to the justice's ideal rule. After all,  $J < q_i < Q$  implies that  $|x - J_i| < |Q - J_i|$ . Similarly, the justice expressively prefers to vote liberal since  $x > q_i$ . Note, if  $x = q_i$ , while the justice is expressively indifferent, she has a strict instrumental preference to vote liberal. As her expressive and instrumental preference both favor a liberal vote, the justice votes liberal for all  $x \in [q_i, Q)$

*Case B-iv:  $x \in [J_i, q_i)$*

Because  $x < Q$ , a conservative disposition is consistent with the status quo and  $P(1) = Q$  and  $P(0) = x$ . Note that in this region, while the justice's expressive preference is to vote conservative as  $x < q_i$ , she instrumentally prefers to vote liberal because it brings the precedent closer to her ideal rule by at least  $|Q - q_i|$ . The resolution of this conflict depends on the weight she places on her instrumental and expressive concerns. The utility she derives from a liberal vote is  $U(0, v_{-i}) = (1 - \gamma)\frac{1}{2}(x - q_i) + \gamma(-|x - J_i|)$  and the utility she derives from a conservative vote is  $U(1, v_{-i}) = (1 - \gamma)\frac{1}{2}(q_i - x) + \gamma(-|Q - J_i|)$ . Let  $\Delta_{lib}(x, \gamma)$  be the net utility of voting liberal when the case facts are  $x$  and the weight on instrumental preferences is  $\gamma$ , and note that, in this range,  $\Delta_{lib}(x, \gamma) = (1 - \gamma)(x - q_i) + \gamma(Q - x)$ , where  $(1 - \gamma)(x - q_i)$  is the net expressive cost of a liberal vote and  $\gamma(Q - x)$  is the net instrumental gain of a liberal vote. We can further decompose the instrumental component into a fixed benefit that does not depend on  $x$ ,  $\gamma(Q - q_i)$ , and a variable component,  $\gamma(q_i - x)$ , that does. The variable component is minimized when  $x = q_i$  and increases as  $x \rightarrow J_i$  (i.e., as  $x$  decreases). In particular, note that when  $x = q_i$ , the variable instrumental and expressive portions are both equal to 0 and all that remains is the fixed instrumental portion. That is,

$$\Delta_{lib}(q_i, \gamma) = \gamma(Q - q_i) > 0.$$

Hence,  $\forall \gamma \in (0, 1)$ , the justice has a strict incentive to vote liberal at  $q_i$ . As  $x \rightarrow J_i$ , the variable instrumental benefit increases but so does the expressive cost. The net effect on  $\Delta_{lib}$  as  $x \rightarrow J_i$  depends on the relative utility weights on instrumental concerns. In particular,  $\frac{\partial \Delta_{lib}}{\partial x} = (1 - 2\gamma)$ . So if  $\gamma = \frac{1}{2}$ , then there is no change in the net value of a liberal vote as  $x \rightarrow J_i$  and, given the fixed benefit,  $\Delta_{lib}(x, \frac{1}{2}) > 0 \forall x \in [J_i, q_i)$ .

If  $\gamma > \frac{1}{2}$ , then the instrumental gains outweigh the expressive costs, and the net value of a liberal vote *increases* as  $x \rightarrow J_i$ . Thus,  $\Delta_{lib}(x, \gamma) > 0 \forall x \in [J_i, q_i)$  if  $\gamma > \frac{1}{2}$ .

If  $\gamma < \frac{1}{2}$ , then the net benefit of a liberal vote decreases as  $x \rightarrow J_i$  (i.e.,  $\frac{\partial \Delta_{lib}}{\partial x} > 0$ ). However, given the fixed instrumental benefit,  $\gamma(Q - q_i)$ , there exists  $\bar{\gamma} \in (0, \frac{1}{2})$  such that the justice prefers to vote liberally at  $J_i$  for all  $\gamma \geq \bar{\gamma}$ . Since  $\frac{\partial \Delta_{lib}}{\partial x} > 0$ , if  $\Delta_{lib}(J_i, \gamma) \geq 0$  for all  $\gamma \geq \bar{\gamma}$ , then  $\Delta_{lib}(x, \gamma) > 0$  for  $\forall x \in [J_i, q_i)$  and  $\gamma \geq \bar{\gamma}$ . To find  $\bar{\gamma}$ , we solve  $\Delta_{lib}(J_i, \gamma) = 0$

for  $\gamma$  and arrive at the solution  $\gamma = \frac{q_i - J_i}{Q + q_i - 2J_i}$ , which is strictly less than  $\frac{1}{2}$  since  $Q > q_i$ . Thus, combining the above, we know that if  $\gamma \geq \bar{\gamma}$ , then  $\Delta_{lib}(x, \gamma) \geq 0 \forall x \in [J_i, q_i]$ . If  $0 < \gamma < \bar{\gamma} < \frac{1}{2}$ , then we know (a)  $\Delta_{lib}(q_i, \gamma) > 0$ , (b)  $\frac{\partial \Delta_{lib}}{\partial x} > 0$ , and (c)  $\Delta_{lib}(J_i, \gamma) < 0$ . By the Intermediate Value Theorem and strict monotonicity, there exists a unique  $\bar{x}(\gamma)$  for each  $\gamma < \bar{\gamma}$  such that (i)  $\Delta_{lib}(x(\gamma), \gamma) = 0$ , (ii)  $\Delta_{lib}(x, \gamma) > 0 \forall x > \bar{x}(\gamma)$ , and (iii)  $\bar{x}(\gamma) = \frac{\gamma(Q + q_i) - q_i}{2\gamma - 1}$ . This implies that if  $\gamma < \bar{\gamma}$ , then a justice votes liberally whenever  $x \geq \frac{\gamma(Q + q_i) - q_i}{2\gamma - 1}$ .

*Case B-v:  $x \in [2J_i - Q, J_i]$*

Because  $x < Q$ , a conservative disposition is consistent with the status quo and  $P(1) = Q$  and  $P(0) = x$ . Note that in this region, while the justice's expressive preference is to vote conservative because  $x < q_i$ , she instrumentally prefers to vote liberal as it brings the precedent closer to her ideal rule. As before,  $U(0, v_{-i}) = (1 - \gamma)\frac{1}{2}(x - q_i) + \gamma(-|x - J_i|)$  and the utility she derives from a conservative vote is  $U(1, v_{-i}) = (1 - \gamma)\frac{1}{2}(q_i - x) + \gamma(-|Q - J_i|)$ . Taking into account that  $x < J_i$ , the net utility of a liberal vote in this region is  $\Delta_{lib}(x, \gamma) = (1 - \gamma)(x - q_i) + \gamma(Q + x - 2J_i)$ . We can similarly decompose the instrumental utility into a component fixed in  $x$ ,  $\gamma(Q - J_i)$ , and a component variable in  $x$ ,  $\gamma(x - J_i)$ . Now, however, as  $x \rightarrow 2J_i - Q$  both the variable instrumental component and the expressive components are decreasing (i.e., they are increasing in  $x$ ). Formally,  $\frac{\partial \Delta_{lib}}{\partial x} = 1 > 0$  in this region. This implies that as  $x \rightarrow 2J_i - Q$ , the net value of a liberal vote decreases. Thus, if for some  $\gamma$ ,  $\Delta_{lib}(J_i, \gamma) \leq 0$ , then  $\Delta_{lib}(x, \gamma) < 0 \forall x \in (2J_i - Q, J_i)$ . It is easy to confirm that  $\Delta_{lib}(J_i, \gamma) = 0$  if and only if  $\gamma = \bar{\gamma}$ ,  $\Delta_{lib}(J_i, \gamma) < 0$  for all  $\gamma < \bar{\gamma}$ , and that  $\Delta_{lib}(J_i, \gamma) > 0$  for all  $\gamma \in (\bar{\gamma}, 1)$ . Finally, note that  $\Delta_{lib}(2J_i - Q, \gamma) < 0$  for all  $\gamma \in (0, 1)$ . So, again, by the Intermediate Value Theorem and monotonicity, we know there exists a unique  $\bar{x}(\gamma) \in (2J_i - Q, J_i)$  for each  $\gamma > \bar{\gamma}$ , such that  $\Delta_{lib}(\bar{x}(\gamma), \gamma) = 0$  and the solution  $\bar{x}(\gamma)$  is defined by setting  $(1 - \gamma)(\bar{x} - q_i) + \gamma(\bar{x} - J_i) + \gamma(Q - J_i) = 0$  or  $\bar{x}(\gamma) = \gamma(2J_i - Q) + (1 - \gamma)q_i$ . Finally, note that since  $\frac{\partial \Delta_{lib}}{\partial x} > 0$ , in the region relevant to this case, it is a best response to vote liberal whenever  $x > \bar{x}(\gamma)$  if and only if  $\gamma > \bar{\gamma}$ .

Collecting the cases, we arrive at the voting rule described in the proposition. *Q.E.D.*

To simplify the remaining proofs, we introduce the following lemma:

LEMMA A.1:  $sgn(J_i - q_i) = sgn(\bar{x}_i(\gamma) - q_i)$

PROOF OF LEMMA A.1: We prove the lemma for the case where  $sgn(J_i - q_i)$  and  $sgn(\bar{x}_i(\gamma) - q_i)$  are negative. The same logic applies when they are positive.

( $\Rightarrow$ ) First, note that by the definition of  $q_i$ , if  $J_i < q_i$ , then  $q_i < Q$ . Now, consider  $\gamma < \frac{q_i - J_i}{Q + q_i - 2J_i} < \frac{1}{2}$ . In this case,  $\bar{x}_i(\gamma) < q_i$  iff  $\frac{q_i - \gamma(Q + q_i)}{1 - 2\gamma} < q_i$ , iff  $(1 - \gamma)q_i < (1 - \gamma)Q$ , or  $q_i < Q$ , which is true by our assumption. Next, consider  $\gamma > \frac{q_i - J_i}{Q + q_i - 2J_i}$ . In that case,  $\bar{x}_i(\gamma) < q_i$  iff  $\gamma(2J_i - Q) + (1 - \gamma)q_i < q_i$ , which is equivalent to  $2J_i < Q + q_i$ . The last expression is true by  $J_i < q_i < Q$ .

( $\Leftarrow$ ) Assume  $\bar{x}_i(\gamma) < q_i$ . Consider first,  $\gamma < \frac{q_i - J_i}{Q + q_i - 2J_i} < \frac{1}{2}$ . In this case,  $\bar{x}_i(\gamma) < q_i$  is equivalent to  $\frac{q_i - \gamma(Q + q_i)}{1 - 2\gamma} < q_i$ , which implies  $q_i < Q$ . Again, by the definition of  $q_i$ ,  $q_i < Q$  implies  $J_i < q_i$ . Next, if  $\gamma > \frac{q_i - J_i}{Q + q_i - 2J_i}$ , then  $\bar{x}_i(\gamma) < q_i$  is equivalent to  $\gamma(2J_i - Q) + (1 - \gamma)q_i < q_i$ , which implies  $2J_i < Q + q_i$ . Assume by way of contradiction that  $J_i > q_i$ . This implies, by definition of  $q_i$ , that  $q_i > Q$  and so  $2J_i > Q + q_i$ , which is a contradiction. Therefore,  $J_i < q_i$  as required. *Q.E.D.*

PROOF OF LEMMA IN MAIN TEXT: First, we establish that case (i) can occur. Assume that the arrangement of case facts and the status quo are such that  $x > Q$  and  $Q > J_i$  for all  $i \in N$ . By the definition of  $q_i$ ,  $J_i < q_i < Q$  for all  $i \in N$  and by lemma A.1 above,  $\bar{x}_i(\gamma) < q_i < Q$ . Hence, for all  $i \in N$ ,  $x > \max\{\bar{x}_i(\gamma), q_i\}$ , which implies that  $\#\tilde{C} = \#\tilde{L} = 0$ .

In order to show that both types of conflicted justices cannot exist simultaneously, let  $\#\tilde{L} \geq 1$  and assume by way of contradiction that  $\#\tilde{C} \geq 1$  as well.  $\#\tilde{L} \geq 1$  implies there exists at least one justice  $i$  such that  $\bar{x}_i(\gamma) < x < q_i$ . By lemma A.1 and the definition of  $q_i$ , this implies  $J_i < q_i < Q$  and thus  $x < Q$ . Similarly,  $\#\tilde{C} \geq 1$  implies there exists at least one justice  $j$  such that  $q_j < x < x_j(\gamma)$ . By lemma A.1 and the definition of  $q_j$ , this implies  $J_j < q_j < Q$ . Thus,  $x > Q$ , which is a contradiction. *Q.E.D.*

PROOF OF PROPOSITION 2: First, notice that given the lemma in the main text, our subcases span the set of possible arrangements of types. Thus, if we establish the existence of a pure strategy NE in all subcases, then we establish that there always exists a pure strategy NE.

*Case i:* WLOG we consider the case where  $\#C \geq \frac{N+1}{2}$  and note that the analysis is analogous when  $\#L \geq \frac{N+1}{2}$ . By definition of types, for each  $i \in C$ ,  $v_i = 1$  is a dominant strategy. Since  $\#C \geq \frac{N+1}{2}$ , this implies that the outcome is  $d = 1$  regardless of how any other justice votes. Hence, no justice in  $N \setminus C$  is pivotal. By proposition 1, it is a strict best response for all other types to vote according to their expressive preferences. Therefore, all justices, conflicted and

otherwise, voting their expressive preferences constitutes the unique equilibrium. This also proves that  $\#C \geq \frac{N+1}{2}$  implies  $d = 1$ . To see the converse, consider the contra positive of  $d = 1 \implies \#C \geq \frac{N+1}{2} : \neg(\#C \geq \frac{N+1}{2}) \implies \neg(d = 1)$  or  $\#C < \frac{N+1}{2} \implies d = 0$ . By way of contradiction, assume,  $\#C < \frac{N+1}{2}$  but  $d = 1$ . Since  $\#C < \frac{N+1}{2}$  and the assumption of the subcase is  $\max\{\#C, \#L\} \geq \frac{N+1}{2}$ , it must be that  $\#L \geq \frac{N+1}{2}$ . But since for each  $i \in L$ ,  $v_i = 0$  is a dominant strategy, it must be the case that  $\sum v_i < \frac{N+1}{2}$  and that  $d = 0$ , which is a contradiction. So,  $\#C < \frac{N+1}{2} \implies d = 0$  as required.

*Case ii:* WLOG we consider the case where  $\#C = \frac{N+1}{2} - 1$  and  $\#\tilde{C} \geq 1$ . By lemma 1 in the main text,  $\#\tilde{C} \geq 1$  implies that  $\#\tilde{L} = 0$ . For all  $i \in C$  (*resp.*  $i \in L$ ) voting conservative (*resp.* liberal) is a dominant strategy, so  $\sum_{i \in L \cup C} v_i = \frac{N+1}{2} - 1$ . Consider first, that for all  $i \in \tilde{C}$ ,  $v_i = 0$ . That is, all conflicted conservatives vote liberal. Then  $\sum_{i \in N} v_i = \frac{N+1}{2} - 1$  and  $d = 0$ ; but then any member of  $\tilde{C}$  is pivotal and has a strict incentive to vote conservative, so it cannot be an equilibrium. Consider instead the possibility that  $\#\tilde{C} > 1$  and 2 or more members of  $\tilde{C}$  vote conservative, so that  $\sum_{i \in N} v_i > \frac{N+1}{2}$  and  $d = 1$ , but then no member of  $\tilde{C}$  is pivotal and so all have a strict incentive to vote liberal, so that also cannot be an equilibrium. Finally, consider that exactly 1 member (possibly the unique member) of  $\tilde{C}$  votes conservative, then  $\sum_{i \in N} v_i = \frac{N+1}{2}$  and  $d = 1$ . In such an arrangement  $i \in \tilde{C}$  is pivotal if and only if  $v_i = 1$ . Thus, the only conflicted conservative voting conservative is pivotal and best-responding. Further, all the conflicted conservatives voting liberal are non-pivotal and best-responding. Hence, we have an equilibrium. As we have considered all cases, this is the unique set of equilibria, and in all equilibria,  $\#C + \#\tilde{C} \geq \frac{N+1}{2} \implies d = 1$ . To see the converse, assume  $d = 1$  but by way of contradiction  $\#C + \#\tilde{C} < \frac{N+1}{2}$ , since the conditions on the case are either  $\#C = \frac{N+1}{2} - 1$  and  $\#\tilde{C} \geq 1$ , or  $\#L = \frac{N+1}{2} - 1$  and  $\#\tilde{L} \geq 1$ . By our assumption, this implies that  $\#L = \frac{N+1}{2} - 1$  and  $\#\tilde{L} \geq 1$ ; but by the reasoning above, exactly 1 member of  $\tilde{L}$  votes liberal and  $\sum_{i \in N} v_i = \frac{N+1}{2} - 1$  and  $d = 0$ , which is a contradiction.

*Case iii:* WLOG we consider the case where  $\#C = \frac{N+1}{2} - 1$  and  $\#\tilde{C} \geq 2$ . By lemma 1 in the main text,  $\#\tilde{C} \geq 2$  implies that  $\#\tilde{L} = 0$ . Since  $\max\{\#C, \#L\} < \frac{N+1}{2}$ , it must be the case that  $\#C + \#\tilde{C} \geq \frac{N+1}{2}$ . While members of  $C$  and  $L$  have dominant strategies to vote conservative ( $v_i = 1$ ) and liberal ( $v_i = 0$ ), members of  $\tilde{C}$  find it optimal to vote conservative if and only if they are pivotal. Let  $M \subseteq \tilde{C}$  be the set of conflicted conservatives that do vote conservative. We first establish that it cannot be an equilibrium to have  $\#M > \frac{N+1}{2} - \#C$ . To see this, note that the total number of conservative votes is  $\sum_{i \in N} v_i = \#C + \#M > \frac{N+1}{2}$ . Since there would be a strict majority of conservative votes, no single justice is pivotal and it is a best response for all  $i \in \tilde{C}$  to vote liberal, contradicting  $\#M > \frac{N+1}{2} - \#C > 0$ . Next, we establish that it cannot be an equilibrium to have  $0 < \#M < \frac{N+1}{2} - \#C$ . To see this

note that the total number of conservative votes would be  $\#C + \#M < \frac{N+1}{2}$  and  $d = 0$ . Consider, a change in vote by any member of  $M$  to a liberal vote ( $v_i = 0$ ). This implies that the total number of conservative votes is one lower and the outcome remains  $d = 0$ . Thus, no member of  $M$  is pivotal and it is a strict best response for all  $i \in \tilde{C}$  to vote liberal, contradicting  $\#M > 0$ . We now establish that the two remaining cases are in fact equilibria, but with different outcomes. To see that exactly  $\#M = \frac{N+1}{2} - \#C$  is an equilibrium note that the total number of conservative votes is  $\#C + \#M = \frac{N+1}{2}$  and  $d = 1$ . Consider, a change in vote by any member of  $M$  to a liberal vote ( $v_i = 0$ ). This implies that the total number of conservative votes would be  $\frac{N+1}{2} - 1$ , and the outcome changes to  $d = 0$ . As the outcome changes, all members of  $M$  are pivotal and it is a strict best response for all  $i \in M$  to vote conservative. It remains to be shown that the remaining conflicted conservatives in  $\tilde{C} \setminus M$  are best-responding. Note that since they are not in  $M$  they must be voting liberal. If any  $i \in \tilde{C} \setminus M$  changes their vote to conservative, the total number of conservative votes is  $\frac{N+1}{2} + 1$ , and the outcome remains  $d = 1$ . Thus, no member of  $\tilde{C} \setminus M$  is pivotal, which means that it is optimal to vote liberal. Finally, if  $\#M = 0$  then  $\sum v_i = \#C < \frac{N+1}{2} - 1$  and  $d = 0$ . Since the deficit in conservative votes needed to change the outcome to  $d = 1$  is strictly greater than 1, no single member of  $\tilde{C}$  is pivotal and so it is indeed a best response to vote liberal. *Q.E.D.*

## Appendix B: Ruling Out a Standard Median-Voter Model

We now discuss to which extent our main findings are consistent with the predominant expressive-voting approach in the literature on judicial politics. In most models, justices are assumed to care about how the case before them is decided—either because they have preferences over litigants or because they apply different legal rules. They do not take into account how their actions affect future jurisprudence. Based on this observation alone, it is questionable whether these models are consistent with our results. In other words, if the justices do not care about making new law, then why are the correlations above driven by situations in which the justices are presented with the opportunity to affect precedent rather than deciding the case at hand (cf. Finding II)? Standard theories of judicial decision-making do not offer a ready explanation for this observation.

This issue notwithstanding, the fact that we observe a stronger raw correlation between justices' perceived ideology and the ideological direction of their votes when pivotal (i.e., Finding I) is consistent with both strategic motivations as well as the kinds of expressive behavior typically assumed in the literature. To see why this is the case and to understand how the fixed effects in our empirical specification allow us to rule out expressive voting,

consider the following application of the median-voter model to the justices' decision.<sup>1</sup>

Let the ideology of each of the nine justices be denoted by a parameter  $J_i$ , and order justices such that  $J_i \leq J_j$  for all  $i < j$ . Further, let each case  $c$  be characterized by a random variable  $X_c$ , and assume that justice  $i$  prefers a liberal decision if and only if  $X_c > J_i$ .  $X_c$  is distributed i.i.d. across cases according to some cumulative distribution function  $F$ . In the case-space approach, for instance,  $X_c$  would denote the facts of the case, while  $J_i$  can be thought of as justice's indifference points over the application of different legal rules (with different implications for the disposition of the case).

If justices vote expressively based on their spatial preferences, then  $i$  casts a liberal vote if and only if  $X_c > J_i$ . Since justices are ordered by increasing thresholds, if justice  $i = 5$  casts a liberal (conservative) vote, then justices  $i = 1 \dots 4$  ( $i = 6 \dots 9$ ) also vote liberally (conservatively). As a result, the four most-liberal justices are pivotal only in cases with a 5–4 liberal disposition, in which they always cast liberal votes (because  $X_c$  falls between  $J_5$  and  $J_6$ ). By contrast, the four most-conservative justices are only pivotal in 5–4 conservative decisions, in which they always vote conservatively (as  $X_c$  lies between  $J_4$  and  $J_5$ ). Provided that  $F$  has full support, however, every justice must vote either way at least some of time. It, therefore, follows that the four most-liberal and the four most-conservative justices are more likely to cast votes that are aligned with the ideological predispositions when they are pivotal than when they are not, consistent with the pattern we observe in the raw data.

The median justice ( $i = 5$ ) is pivotal in *all* 5–4 decisions. Thus, when pivotal she votes liberally in a fraction of  $[F(J_6) - F(J_5)] / [F(J_6) - F(J_4)]$  cases, whereas she votes liberally in share of  $[1 - F(J_6)] / [1 - F(J_6) + F(J_4)]$  cases when not. The former quantity is larger than the later whenever  $J_5$  is sufficiently close to  $J_4$ , i.e., whenever the median justice is sufficiently liberal, and it is smaller whenever the median justice is sufficiently conservative, i.e., when  $J_5$  is sufficiently close to  $J_6$ . Thus, even the median justice might be more likely to cast a vote that aligns with her personal ideology when pivotal. As a consequence, the pattern in Figure 1 and col. (2) of Table 2 is consistent with expressive voting.

The results in the rightmost columns of Table 2, however, are not. To see this it is useful to first note why a spatial model of voting predicts a stronger correlation between preferences and pivotal votes. The reason is that justices can only be pivotal in closely decided cases, which in turn are the ones that divide the bench into two nearly equally large, ideologically homogeneous camps. Conditional on the case seeing a minimal winning coalition, i.e.,  $X_c$  falling between  $J_4$  and  $J_6$ , the justices to the left of the median vote liberally, whereas those to the right vote conservatively. Cases with  $X_c < J_4$  or  $X_c > J_6$ , however, have winning coalitions that include members on both sides of median—up to the point where ideology

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<sup>1</sup>We owe the following formalization to an anonymous referee.

loses nearly all of its predictive power in 8–1 and 9–0 decisions. When comparing votes across cases that are and are not very divisive it may appear as if justices behave differently when they are pivotal. In other words, the median-voter model stipulates that there are unobserved case characteristics that correlate with being pivotal and with how individual justices vote.  $X_c$  is a source of omitted variable bias.

In our empirical approach, we address this source of bias by controlling for justice-by-close-case (or finer) fixed effects. Including justice-by-close-case fixed effects means that all identifying variation comes from within-justice comparisons across cases that saw a minimal winning coalition, i.e., for which  $J_4 < X_c < J_6$ . Intuitively, we condition on the case being divisive. Even though we cannot control for the exact value of  $X_c$ , conditioning on observing a minimal winning coalition is sufficient for us to be able to reject the standard median-voter model whenever  $\hat{\delta} \neq 0$ .

To understand why, first note that, under the assumptions of the median-voter model, the median justice is pivotal in *any* case with a minimal winning coalition. Since the median justice is always pivotal in close cases, she contributes *no* identifying variation after controlling for justice-by-close-case (or finer) fixed effects. Further note, the median-voter model predicts that, conditional on  $J_4 < X_c < J_6$ , all justices to left of the median vote liberally, whereas everyone to the right of the median casts conservative votes, *regardless* of whether the respective justices are pivotal. Thus, if the median-voter model generated the data, then being pivotal should be uncorrelated with how this set of justices votes in close cases. Since these are the only justices that contribute identifying variation in the specifications in cols. (4)–(7) of Table 2, the standard median-voter model predicts that  $\hat{\delta} = 0$ .

The median-voter model is, of course, restrictive insofar as it assumes that justices can always be ordered from left to right. However, justices’ views on certain issues may not always be well described by a single left-right dimension. Justice Scalia, for instance, was known to often espouse liberal views in privacy related cases, despite his generally very conservative outlook. To account for the fact as well as for the possibility that preferences may change over time when justices are replaced or when their preferences change, our empirical specification in col. (5) of Table 2 interacts the baseline justice-by-close-case fixed effects with indicators for each natural court and issue area, while col. (7) additionally includes justice-by-natural-court-by-issue-area fixed effects. Beyond the stringent assumptions of the median voter model, the question of whether the stronger correlation between ideology and pivotal votes can be explained by factors other than strategic behavior comes down to bias from either omitted variables or simply misspecification.



### Appendix C: Comparative Statics

In this appendix, we generate additional empirical predictions from our model under stronger assumptions about the distribution of cases. In particular, we will assume that the case facts are uniformly distributed over the unit interval,  $x \sim U[0, 1]$ . While this is a sufficient condition for the implications that follow, it is not necessary. As long as the distribution of cases is “flat enough,” then these implications follow. We then show that the data are consistent with the additional predictions.

**IMPLICATION 3:** *The number of cases where pivotality will affect voting is larger for justices who are ideologically more extreme relative to the status quo.*

**PROOF:** Because we are assuming a uniform distribution of case facts over the unit interval, it is sufficient to show that the range of cases where pivotal affects voting is larger for more ideological extreme justices. WLOG, consider justices  $k$  and  $i$  such that  $J_k < J_i < Q$ . We will show that the range of case facts where justice  $k$  votes liberally if and only if liberal is larger than for justice  $i$ . There are two relevant divisions of the parameter space to consider. First, if  $\gamma < \frac{q_i - J_i}{Q + q_i - 2J_i}$ , then this range for justice  $k$  is  $q_k - \left( \frac{q_k - \gamma(Q - q_k)}{1 - 2\gamma} \right)$  or  $\frac{\gamma(Q - 3q_k)}{1 - 2\gamma}$ . Since  $q_k < q_i$  this range is larger for justice  $k$  than for justice  $i$ . Second, if  $\gamma \geq \frac{q_i - J_i}{Q + q_i - 2J_i}$ , then we want to show that  $q_k - (\gamma(J_k - Q) + (1 - \gamma)q_k)$  is larger than  $q_i - (\gamma(J_i - Q) + (1 - \gamma)q_i)$  or that  $J_i - J_k > q_i - q_k$  which holds given  $\frac{\partial q}{\partial J_i} \leq 1$ . *Q.E.D.*

Another prediction follows from the observation that when justices put more weight on aligning the law with their personal ideology, it becomes optimal to vote against their expressive preferences for a wider range of case facts. Since the trade-off between a justice’s expressive and instrumental concerns is only relevant when a single vote decides the outcome of the case, being pivotal exerts a larger impact as  $\gamma$  increases. Thus:

**IMPLICATION 4:** *If justices perceive the outcomes of some cases as more important than those of others, then being pivotal has a larger effect on votes in the former set of disputes.*

Our final prediction comes from an observation that arises in Proposition 2 in the main text. Consider any situation where there is no majority of unconflicted justices. That is there exists a majority composed of unconflicted and conflicted justices that prefer a particular outcome. We call such a majority a conflicted majority and note that any equilibrium where they prevail must be a 5–4 decision. To see this, note that if the vote of a conflicted justice is not pivotal, then it is optimal for her to follow her expressive preferences, even if she strongly dislikes the current status quo. As a consequence, when there are two or more

conflicted justices that would be willing to vote against their expressive position and only one conflicted vote needed to establish a majority, then only one will vote against her expressive interest: the majority win will and the outcome will become endogenous close. In fact, this logic extends to any situation when at least one conflicted vote is required to win a majority and there is an excess of possible conflicted justices. If the conflicted majority prevails then only exactly as many conflicted justices as needed will support the majority, and wins become endogenously close when they occur.

However, when the votes of two or more conflicted justices are required for the conflicted majority to prevail, it is a) not the case that they will always prevail and b) when they lose their loss will be endogenously lopsided, i.e., they will lose by two or more votes. Lopsided losses arise because the votes of two or more conflicted justices are needed, the voting game becomes a coordination problem. A loss for the conflicted majority is a coordination trap. In the event of the coordination trap, the conflicted majority will necessarily lose by two or more votes as no one justice can change her vote and the outcome. Thus, we are left in a situation where if there is no unconflicted majority, the conflicted majority will a) win with minimal winning margins and b) sometimes lose in a lopsided fashion.<sup>2</sup>

In order, to translate this logic into a testable prediction, we have to be able to connect observations about conflicted majorities to real world analogues. First, note that any conflicted majority must consist of a connected set of justices. That is a liberal conflicted majority (when one exists) will consist of all justices  $\{J_i : i \leq L\}$  for some  $L \geq 5$  and a conservative conflicted majority will consist of all justices  $\{J_i : i \geq C\}$  for some  $C \leq 5$ . Which of the conflicted majorities arises depends on both case facts and the arrangement of preferences. However, note that by Implication 3 as justices become more conservative (liberal), the range of case facts for which the justice becomes a conflicted conservative (liberal) increases. Thus, we argue that when a court is more conservative (liberal), the court is more likely to have a conflicted conservative (liberal) majority. This implies that the ideological majority is more likely to find itself as a conflicted majority and thus subject to narrow wins and lopsided losses. Put differently:

**IMPLICATION 5:** *The Court's ideological majority should be more likely to barely win a case than to just lose it.*

We now take this additional implications to the data. To probe the prediction that being pivotal for setting precedent has a greater impact on the behavior of justices who are ideologically more extreme relative to the status quo (i.e., Implication 3), we divide justices into quartiles based on their perceived ideology, i.e., their Segal–Cover scores. We then estimate

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<sup>2</sup>See Spenkuch et al. (2018) for a similar result pertaining to strategic voting in legislatures.

the effect of being pivotal on casting a conservative vote for each quartile. The first two columns of Appendix Table A.1 contain the results. When a justice’s vote is pivotal, the difference in the probability of voting conservatively widens between moderates and more-extreme members of the Court on both sides of the ideological spectrum. That is, relative to their more-moderate counterparts, staunchly liberal justices vote slightly more liberally, whereas staunch conservatives judge vote considerably more conservatively. Thus, if one believes that, on average, the legal status quo in 5–4 splits lies in the middle of the ideological spectrum, then Implication 3 is consistent with the data.

The remaining columns of Table A.1 study the prediction that being pivotal has a greater effect on justices’ votes in cases that are perceived as important, i.e., Implication 4. To proxy for the importance of Supreme Court cases, we differentiate among (i) landmark cases according to Congressional Quarterly (Savage 2010); (ii) cases that were and were not reported on by either the *LA Times*, *Washington Post*, or *New York Times* prior to the Court’s decision. Drawing on data from Clark et al. (2015), only about half of all cases receive any coverage in these three newspapers *before* a verdict is announced. To be clear, we are not suggesting that media attention causes justices to care about a particular dispute, but simply that justices’ and newspaper editors’ assessment of the importance of a case are correlated. If one accepts the assumption that this measure proxies for  $\gamma$  in our theoretical model, then the pattern of point estimates in columns (3)–(6) is consistent with Implication 4.

Finally, we examine Implication 5 by examining whether the Court is more likely to issue a narrowly decided ruling that accords with the ideological leaning of its majority than one that does not. According to most anecdotal accounts, the Supreme Court had a clear liberal majority from 1962 (when President Kennedy appointed the union lawyer Arthur Goldberger) until 1972 (when Nixon had reshaped the Court by appointing Burger, Blackmun, Powell, and Rehnquist). Before and after, the median justice was either clearly conservative or moderately so.<sup>3</sup>

In Appendix Figure A.3, we show the distribution of the number of votes that accord with the ideological position of the Court’s majority. The evidence therein confirms that

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<sup>3</sup>This assessment is broadly consistent with the results of Martin and Quinn (2002), who rely on justices’ voting records to estimate their ideological ideal points (under the assumption of expressive voting). Taking Martin and Quinn’s results at face value, between the end of WW II and the death of Justice Frankfurter, the median member of the Court was conservative-leaning. Justice Goldberger’s appointment in 1962 caused the Court’s median to shift to decidedly liberal, while the appointment of Chief Justice Burger in 1969 had the opposite effect. Many observers of the Court, however, take issue with Martin and Quinn’s finding that the Court’s median was conservative as early as 1969. According to most, the Court did not have a conservative majority until all Nixon appointees had been seated. In any case, partitioning the post-WW II period according to the estimates of Martin and Quinn would leave the finding in Figure A.3 virtually unaffected (cf. Appendix Figure A.4).

narrow wins for the ideological majority are significantly more likely than narrow losses. In fact, 4–5 losses are about as frequent as 3–6 losses, whereas 5–4 wins are considerably more likely to occur than 6–3 wins. Based on Figure A.3, cases that the Court’s ideological majority narrowly loses appear to have “missing mass.” While this finding is consistent with Implication 5, we readily acknowledge that our test is weak in the sense that expressive rather than strategic voting might yield similar patterns. In sum, the results in Appendix Table A.1 and Figure A.3 are consistent with the comparative statics of our model.

## Appendix D: Data Appendix

This appendix provides a self-contained description of all data used in the paper, as well as precise definitions together with the sources of all variables.

### D.1. *Justices’ Votes and Case Outcomes*

The main data set used in our analysis is the Supreme Court Database (SCDB), the authoritative resource on all cases decided by the Court (Spaeth et al. 2017). There exists a modern and a legacy version of the database. The former covers all cases decided between 1946–2016, while the latter pertains to the period from 1791–1945. Our analysis relies on the modern version for two reasons: (i) We lack proxy measures for the ideology of justices that were appointed before 1937, and (ii) the classification of the decisions in the legacy database as either liberal or conservative continues to be based on only a subset of legal issues that the Supreme Court considered.

The available pieces of information in the database include, among other things, the identity of the lower court whose decision was reviewed, the parties to the suit, the legal provisions considered in a particular case, and the votes of the justices. The data also contain expert assessments of the ideological direction of each decision and vote. These assessments are determined by use of a detailed rubric that maps categories of litigants, the substantive issue at hand, and the identity of the winning party into discrete categories for whether the outcome is “conservative,” “liberal,” or, less common, “unspecifiable.” For example, when an employer opposes the government in a case involving employment discrimination, a disposition in favor of the government (employer) is coded as liberal (conservative). In a case involving Fourth Amendment protections, however, a pro-government (individual) vote would be coded as conservative (liberal). About 1.6% of cases outcomes are either missing or classified as “unspecifiable.” These disputes are excluded from our analysis. We further exclude all cases for which we do not have Segal–Cover scores for all justices who voted on the case (see below).

Since there remains some ambiguity with respect to the coding of cases, we show in Appendix E that using the “corrected” coding scheme of Epstein et al. (2013) has virtually no effect on our results. For Epstein et al. (2013), Judge Posner personally reviewed a random sample of 110 cases. His classification coincided with that in the Supreme Court Database 75% of the time. Epstein et al. (2013) propose a revised classification scheme that corrects almost all of the discrepancies.

Our analysis uses the following variables:

*Conservative Outcome* is an indicator variable equal to one if the SCDB classified the Court’s decision in a particular case as conservative. It is equal to zero if the decision is classified as liberal.

*Unanimous Decision* is an indicator variable equal to one if, and only if, according to the SCDB, all justices who participated in a particular case voted in the same direction.

*Minimal Majority* is an indicator variable equal to zero if, and only if, any justice changing her vote would have *not* resulted in the same case disposition. Our coding of this variable takes into account the lower court’s decision in the case of (potential) ties.

*Number of Justices Voting* is defined as the number of justices who, according to the SCDB, cast a vote in a particular dispute.

*Issue Area* corresponds to broad categories for the subject matter of the case, as identified in the SCDB. We differentiate between the following issue areas: *Criminal Procedure*, *Civil Rights*, *First Amendment*, *Due Process*, *Privacy*, *Unions*, *Economic Activity*, *Judicial Power*, *Federalism*, *Federal Taxation*, and *Other*. The latter category includes all cases that do not belong to any of the former issue areas.

*Close Case* is defined in the same way as *Minimal Majority*.

*Dissent in Lower Court* is an indicator variable equal to one if, and only if, the Supreme Court’s majority opinion mentioned that one or more of the members of the court whose decision the Supreme Court reviewed dissented (see the coding in the SCDB).

*Unanimous Vote in Lower Court* is the complement to *Split Vote in Lower Court*.

*Lower-Courts Conflict* is an indicator variable equal to one if, and only if, according to the SCDB, the Court granted the petition for certiorari because of either a federal court conflict,

a federal court conflict and to resolve an important or significant question, a putative conflict, a conflict between a federal court and a state court, or a state court conflict.

*No Lower-Courts Conflict* is the complement to *Split Vote in Lower Court*.

*Conservative Vote* is an indicator variable equal to one if, and only, if the SCDB classifies the direction of a justice’s vote on a particular case as conservative.

*Pivotal* is an indicator variable equal to one if, and only if, a particular justice switching her vote on the merits of the case would have changed that case’s disposition. Our coding of this variable takes into account the lower court’s decision and the potential of ties.

*Pivotal for Precedent* is an indicator variable equal to one if, and only if, a particular justice changing her decision whether or not to sign the majority would have changed whether it sets precedent. Our coding of this variable takes into account the lower court’s decision in the case of (potential) ties, and how many (other) justices have joined the majority opinion. We assume that, for a majority opinion to set precedent, a strict majority of the justices voting on the case must join.

## D.2. *Justices’ Ideology*

Our main analysis uses Segal–Cover scores as proxies for justices’ ideological leanings *before* being appointed to the Court (Segal and Cover 1989; ?). In the literature on judicial politics, Segal–Cover scores have become the *de facto* standard measure of justices’ ideology. They are constructed from newspaper editorials that were published in the *New York Times*, *Washington Post*, *Los Angeles Times*, and *Chicago Tribune* between the justice’s nomination by the president and the confirmation vote in the Senate. For each justice, human coders read the editorial, coding every paragraph as either “liberal,” “moderate,” “conservative,” or “not applicable.” Liberal paragraphs, for instance, mention the nominee’s general liberalism, identification with Democratic party leaders or causes, support for women and minorities in equal rights disputes, for defendants in criminal cases, or for individuals in privacy and First Amendment cases against the government. Statements are coded as conservative if they go in the opposite direction, while moderate paragraphs must explicitly ascribe moderation or both liberal and conservative values to the nominee. Excluding statements coded as “not applicable,” Segal and Cover (1989) define a justice’s perceived ideology as the fraction of liberal paragraphs minus the fraction of conservative ones. We rescale their index so that

a value of zero corresponds to “unanimously liberal,” while a value of one corresponds to “unanimously conservative.”<sup>4</sup>

Our analysis uses the following variables:

*Ideology (Score)* is defined as a justice’s perceived ideology, as measured by Segal and Cover (1989). We rescale the original Segal–Cover scores so that one corresponds to zero and zero corresponds to one in Segal and Cover’s coding scheme. As a result, the most conservative (liberal) justices in our data have an ideology score of one (zero).

### D.3. *Other Data Sources*

In addition to the previously listed data, we use information on the number of newspaper reports in the *LA Times*, *Washington Post*, and *New York Times* on each case *prior* the Court’s ruling. The relevant data come from Clark et al. (2015). As explained in the notes to Table A.1, the data in Savage (2010) and Clark et al. (2015) cannot be linked at all cases in the Supreme Court Database, primarily because these sources cover different years. Regression models that rely on these data have, therefore, somewhat fewer observations.

## Appendix E: Sensitivity and Robustness Checks

In this appendix, we present three sets of robustness checks for our results in the main text. Specifically, in Appendix Tables A.2–A.5 show that our results in Tables 2–4 and A.1 are qualitatively robust to excluding the votes of the chief justice. The literature provides some evidence that the chief justice behaves strategically during conference and in the assignment of opinions (e.g., Maltzman and Wahlbeck, 1996; Maltzman et al., 2000; Still et al., 2010). What Tables A.2–A.5 suggest is that strategic voting is also common when the associate justices decide on the merits of the case.

Appendix Tables A.6–A.9 show that the results in the main text are all qualitatively robust if we exclude whichever justice authored the opinion from our sample (cf. Tables 2–4 and A.1).<sup>5</sup> This is important to rule out that our empirical findings are driven by “author effects.”

In Appendix Tables A.10–A.13 we replicate our analysis using Epstein et al.’s (2013) coding scheme to classify votes as either “liberal” or “conservative.” As explained in Appendix D, Judge Posner personally reviewed a random sample of 110 cases. His classification coincided with that in the Supreme Court Database 75% of the time. Epstein et al. (2013) propose a revised classification scheme that corrects almost all of the discrepancies. The results in

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<sup>4</sup>Segal and Cover (1989) report a high inter-coder reliability ( $\pi = .71$ ,  $p < .001$ ).

<sup>5</sup>For cases with unsigned majority opinions, we exclude all observations.

Tables A.10–A.13 demonstrate that using their alternative coding has little effect on our estimates.

In Appendix Tables A.14–A.17, we implement the sample restrictions recommended by McGuire et al. (2009). McGuire et al. (2009) develop a theory of the interactions between litigants, lower court judges, and Supreme Court justices. Based on this theory, they argue that measuring the Court’s ideological output by the direction of its decision suffers from “affirmation bias.” They offer sample selection rules that allow researchers to circumvent this bias. Reassuringly, implementing these restrictions leaves our conclusions unaffected.

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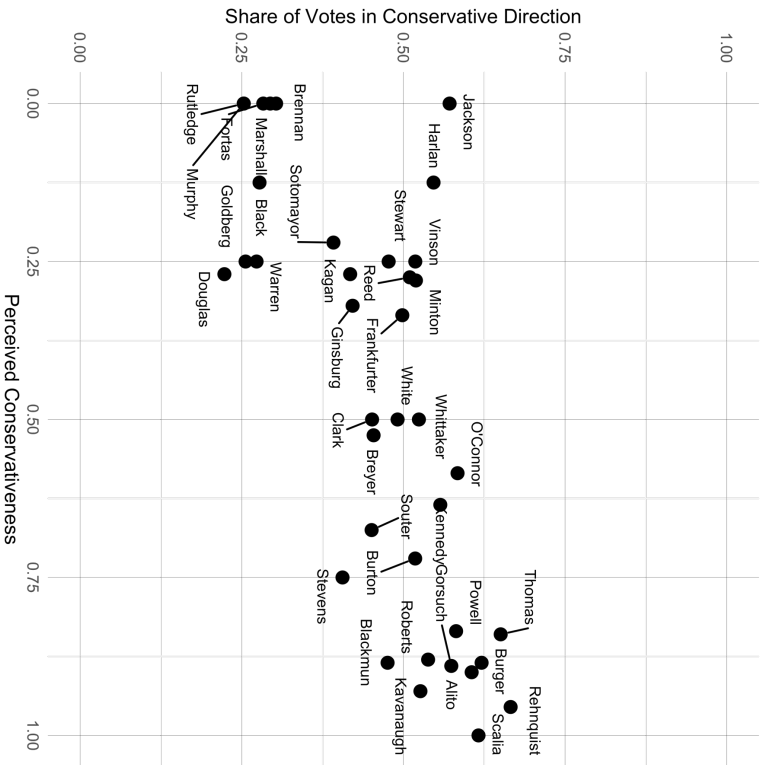
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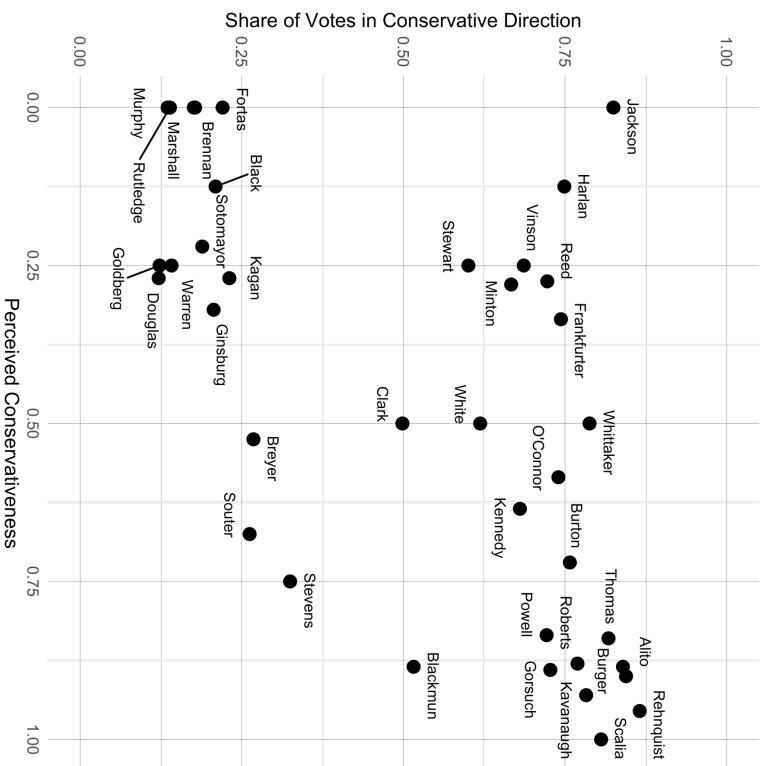
Sill, K. L., J. D. Ura, and S. L. Haynie (2010). “Strategic Passing and Opinion Assignment on the Burger Court.” *Justice System Journal*, 31(2): 164–179.

### Appendix Figure A.1: Votes When Justices Are and Are Not Decisive for the Setting New Precedent

A. Not Decisive for Majority Opinion Setting Precedent

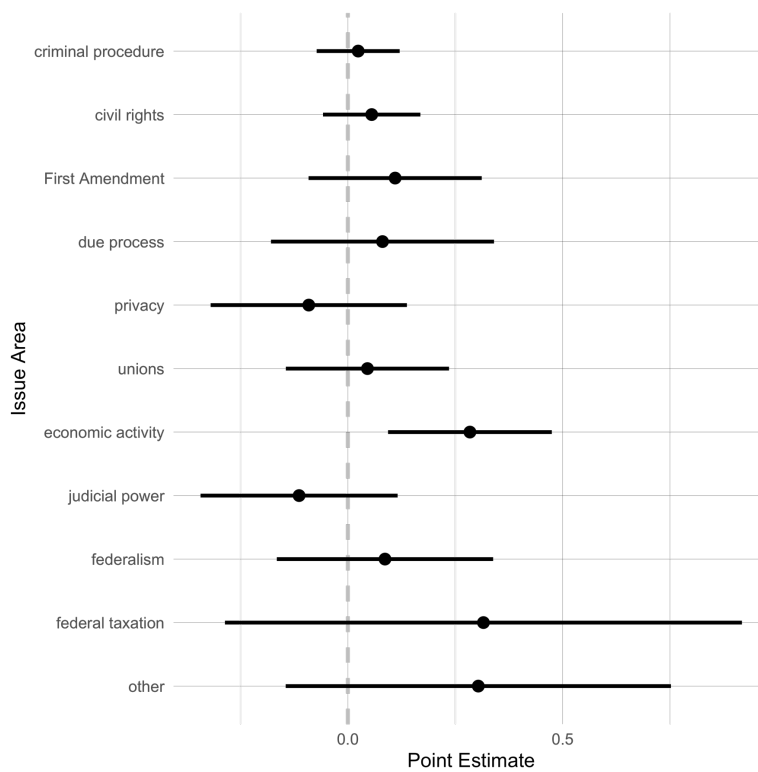


B. Decisive for Majority Opinion Setting Precedent



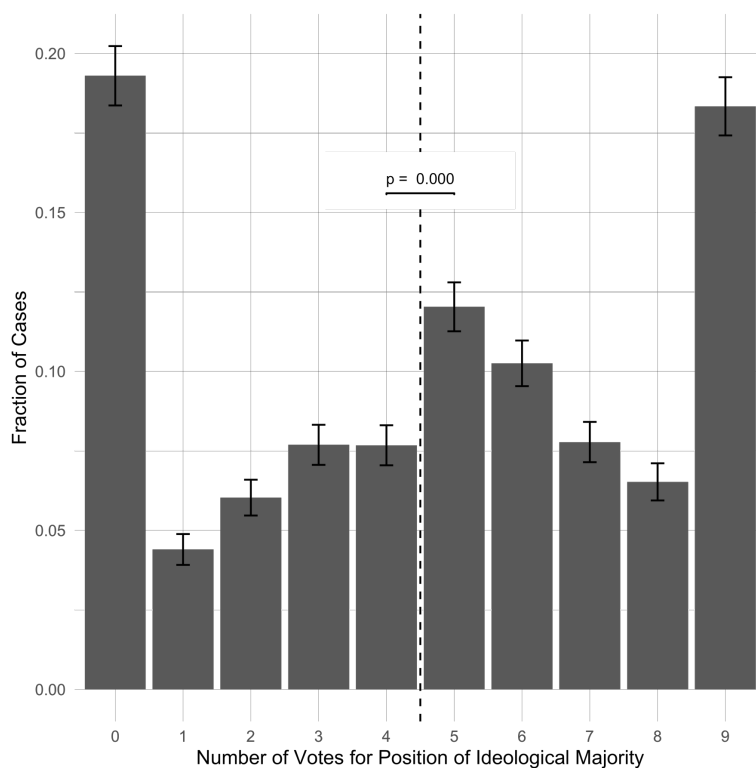
Notes: Figure replicates Figure 1 in the main text, distinguishing between situations in which a justice was decisive for the majority opinion setting precedent (right panel) and those in which he she was not (left panel) rather than being decisive for the disposition of the case.

**Appendix Figure A.2: Estimated Interaction Term ( $\delta$ ), by Broad Issue Area**



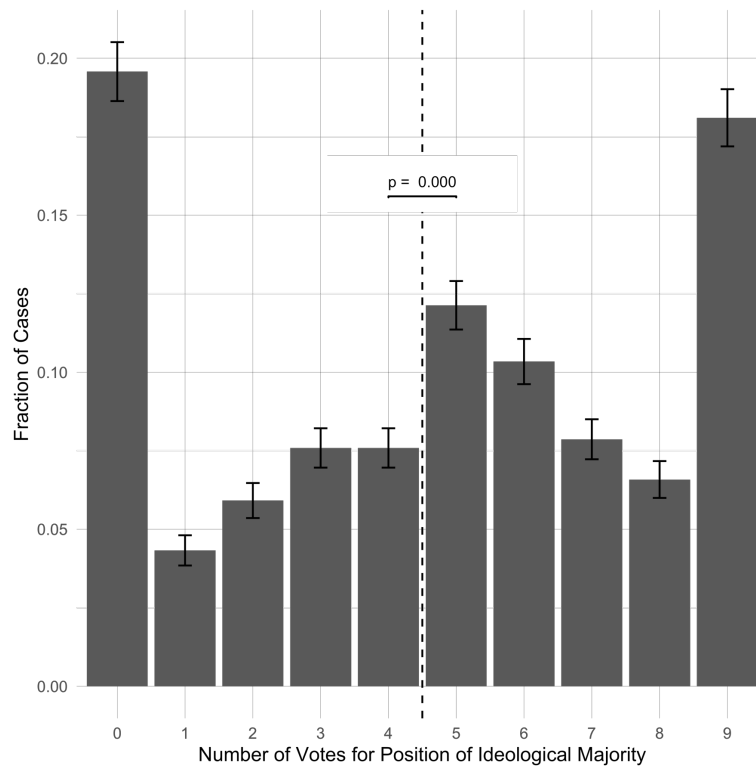
*Notes:* Figure shows point estimates and 95%-confidence intervals for  $\delta$  in equation (1), estimated separately for eleven issue areas. All estimates are based on the specification in column (5) of Table 2.

**Appendix Figure A.3: Observed Case Outcomes**



*Notes:* Figure shows the fraction of cases in which a particular number of votes accord with the ideological position of the Court's majority, restricting attention to disputes in which all nine justices participated. For example, "5" means that five conservative (liberal) votes were cast when the Court had a conservative-leaning (liberal-leaning) majority. As explained in the main text, we classify the Court's majority as liberal-leaning from 1962–1971, and as conservative-leaning from 1946–1961 as well as after 1972. Votes are classified as either liberal or conservative according to the expert assessments in the Supreme Court Database (Spaeth et al. 2021).

**Appendix Figure A.4: Observed Case Outcomes, Relying on Martin and Quinn's Estimates of the Court's Median**



*Notes:* Figure replicates Figure A.3 in the main text, relying Martin and Quinn's (2002) estimates of justices' ideal point to determine the periods over which the Supreme Court had liberal and conservative leaning majorities. In practice, this means that we classify the Court's majority as liberal-leaning from 1962–1968, and as conservative-leaning from 1946–1961 and after 1969.

**Appendix Table A.1: Comparative Statics**

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Pivotal for Precedent	-0.016	-0.016				
× Staunch Liberal	(0.012)	(0.013)				
Pivotal for Precedent	0.016	0.024				
× Moderate Liberal	(0.019)	(0.020)				
Pivotal for Precedent	0.027*	0.021				
× Moderate Conservative	(0.016)	(0.017)				
Pivotal for Precedent	0.073***	0.065***				
× Staunch Conservative	(0.012)	(0.013)				
Ideology × Pivotal for Precedent			0.133**	0.126**		
× Landmark Case			(0.056)	(0.054)		
Ideology × Pivotal for Precedent			0.097***	0.086***		
× Not Landmark Case			(0.020)	(0.020)		
Pivotal for Precedent			-0.080**	-0.075**		
× Landmark Case			(0.038)	(0.037)		
Pivotal for Precedent			-0.012	-0.009		
× Not Landmark Case			(0.016)	(0.017)		
Ideology × Pivotal for Precedent					0.129***	0.139***
× Newspaper Coverage					(0.019)	(0.019)
Ideology × Pivotal for Precedent					0.109***	0.076**
× No Newspaper Coverage					(0.029)	(0.030)
Pivotal for Precedent					-0.039**	-0.049**
× Newspaper Coverage					(0.020)	(0.020)
Pivotal for Precedent					-0.037**	-0.027
× No Newspaper Coverage					(0.018)	(0.017)
H <sub>0</sub> : Staunch = Moderate [p-value]	0.000	0.000	--	--	--	--
H <sub>0</sub> : Equal Coefficients [p-value]	--	--	0.081	0.113	0.685	0.157
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.175	0.216	0.179	0.220	0.188	0.226
Number of Observations	76,252	76,252	69,927	69,927	60,968	60,968

*Notes:* Entries are coefficients and standard errors from estimating variants of the model in equation (1). Coefficients are allowed to vary based on a justice's ideological leaning (columns (1) and (2)), whether the case is a "landmark" case according to Savage (2010) (columns (3) and (4)), and whether the case received any coverage in the LA Times, Washington Post, or New York Times prior to the decision (columns (5) and (6)). Hypothesis tests in the first two columns refer to the joint null that the effect of being pivotal is the same for staunch and moderate liberals as well as for moderate and staunch conservatives, whereas tests in the remaining columns are tests of the null of equal coefficients across both sets of cases. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. The number of observations in the last four columns is lower because missing information information in the source data (see the Data Appendix for details).

**Appendix Table A.2: Replication of Table 2, Excluding Chief Justices' Votes**

	Conservative Vote						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pivotal × Ideology		0.247*** (0.031)	0.247*** (0.031)	0.099*** (0.034)	0.086*** (0.030)	0.077** (0.031)	0.078* (0.040)
Ideology	0.311*** (0.013)	0.283*** (0.013)	0.282*** (0.013)				
Pivotal		-0.054** (0.026)	-0.004 (0.033)	-0.004 (0.027)	0.003 (0.018)	0.001 (0.020)	0.002 (0.024)
Constant	0.319*** (0.009)	0.324*** (0.009)					
Fixed Effects:							
Close Case	No	No	Yes	No	No	No	No
Justice × Close Case	No	No	No	Yes	No	No	No
Justice × Close Case × Issue Area	No	No	No	No	Yes	Yes	Yes
Justice × Natural Court	No	No	No	No	No	Yes	No
Justice × Natural Court × Issue Area	No	No	No	No	No	No	Yes
R-Squared	0.040	0.044	0.045	0.111	0.335	0.343	0.535
Number of Observations	67,615	67,615	67,615	67,615	67,615	67,615	67,615

*Notes:* Entries are coefficients and standard errors from estimating variants of the empirical model in equation (1) by OLS. In a departure from the results reported in the main text, the sample excludes the votes of the chief justices. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.3: Replication of Table 3, Excluding Chief Justices' Votes**

<i>A. Vote on the Merits</i>						
	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Ideology × Pivotal for Disposition	0.114*** (0.031)	0.097*** (0.032)			0.048 (0.044)	0.038 (0.043)
Pivotal for Disposition	-0.004 (0.024)	-0.001 (0.025)			0.017 (0.034)	0.016 (0.034)
Ideology × Pivotal for Precedent			0.097*** (0.017)	0.084*** (0.018)	0.077*** (0.026)	0.068*** (0.025)
Pivotal for Precedent			-0.017 (0.014)	-0.013 (0.015)	-0.024 (0.021)	-0.021 (0.020)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.167	0.209	0.167	0.209	0.168	0.210
Number of Observations	67,615	67,615	67,615	67,615	67,615	67,615
<i>B. Disagreement with Majority Opinion</i>						
	Issue Special Concurrence					
	(7)	(8)	(9)	(10)	(11)	(12)
Pivotal for Disposition	0.038*** (0.004)	0.041*** (0.004)			0.103*** (0.009)	0.105*** (0.009)
Pivotal for Precedent			-0.031*** (0.004)	-0.029*** (0.004)	-0.075*** (0.008)	-0.075*** (0.008)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.031	0.070	0.032	0.070	0.038	0.076
Number of Observations	67,615	67,615	67,615	67,615	67,615	67,615

*Notes:* Entries are coefficients and standard errors that differentiate between whether a justice was pivotal for the disposition of the case or for the majority opinion setting legal precedent. In a departure from the results reported in the main text, the sample excludes the votes of the chief justices. Within each pair of regressions, the specification in the column on the left includes justice-by-close-case-by-court fixed effects, while that on the right accounts for issue- and term-specific justice-by-close-case-by-court fixed effects. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.



**Appendix Table A.4: Replication of Table 4, Excluding Chief Justices' Votes**

	Conservative Vote			
	(1)	(2)	(3)	(4)
Ideology × Pivotal for Precedent	0.106***	0.107***		
× Dissent in Lower Court	(0.036)	(0.034)		
Ideology × Pivotal for Precedent	0.095***	0.079***		
× Unanimous Vote in Lower Court	(0.021)	(0.022)		
Pivotal for Disposition	-0.029	-0.037		
× Dissent in Lower Court	(0.027)	(0.025)		
Pivotal for Disposition	-0.014	-0.008		
× Unanimous Vote in Lower Court	(0.015)	(0.016)		
Ideology × Pivotal for Precedent			0.058	0.057
× Conflict among Lower Courts			(0.043)	(0.044)
Ideology × Pivotal for Precedent			0.107***	0.091***
× No Conflict among Lower Courts			(0.019)	(0.019)
Pivotal for Disposition			-0.012	-0.009
× Conflict among Lower Courts			(0.035)	(0.037)
Pivotal for Disposition			-0.018	-0.014
× No Conflict among Lower Courts			(0.014)	(0.014)
H <sub>0</sub> : Equal Coefficients [p-value]	0.796	0.521	0.279	0.448
Fixed Effects:				
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes
R-Squared	0.167	0.210	0.167	0.210
Number of Observations	67,599	67,599	67,615	67,615

*Notes:* Entries are coefficients and standard errors on  $\delta$  in equation (1), which is allowed to vary based on whether the judges on the lower court deciding the same case were split (columns (1) and (2)), and whether different lower courts had previously issued contradictory rulings on the same legal question (columns (3) and (4)). In a departure from the results reported in the main text, the sample excludes the votes of the chief justices. All hypothesis tests are tests of the null of equal coefficients across the respective settings. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.5: Replication of Table A.1, Excluding Chief Justices' Votes**

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Pivotal for Precedent	-0.016	-0.016				
× Staunch Liberal	(0.012)	(0.013)				
Pivotal for Precedent	0.022	0.029				
× Moderate Liberal	(0.018)	(0.019)				
Pivotal for Precedent	0.027*	0.021				
× Moderate Conservative	(0.016)	(0.017)				
Pivotal for Precedent	0.074***	0.065***				
× Staunch Conservative	(0.013)	(0.013)				
Ideology × Pivotal for Precedent			0.106*	0.092		
× Landmark Case			(0.059)	(0.057)		
Ideology × Pivotal for Precedent			0.099***	0.089***		
× Not Landmark Case			(0.019)	(0.020)		
Pivotal for Precedent			-0.070*	-0.064*		
× Landmark Case			(0.038)	(0.037)		
Pivotal for Precedent			-0.011	-0.010		
× Not Landmark Case			(0.015)	(0.015)		
Ideology × Pivotal for Precedent					0.117***	0.125***
× Newspaper Coverage					(0.020)	(0.020)
Ideology × Pivotal for Precedent					0.120***	0.086***
× No Newspaper Coverage					(0.030)	(0.031)
Pivotal for Precedent					-0.032*	-0.041**
× Newspaper Coverage					(0.019)	(0.019)
Pivotal for Precedent					-0.037**	-0.027
× No Newspaper Coverage					(0.017)	(0.017)
H <sub>0</sub> : Staunch = Moderate [p-value]	0.000	0.000	--	--	--	--
H <sub>0</sub> : Equal Coefficients [p-value]	--	--	0.073	0.095	0.971	0.571
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.167	0.210	0.171	0.212	0.177	0.217
Number of Observations	67,615	67,615	62,011	62,011	54,072	54,072

*Notes:* Entries are coefficients and standard errors from estimating variants of the model in equation (1). Coefficients are allowed to vary based on a justice's ideological leaning (columns (1) and (2)), whether the case is a "landmark" case according to Savage (2010) (columns (3) and (4)), and whether the case received any coverage in the LA Times, Washington Post, or New York Times prior to the decision (columns (5) and (6)). In a departure from the results reported in Table A.1, the sample excludes the votes of the chief justices. Hypothesis tests in the first two columns refer to the joint null that the effect of being pivotal is the same for staunch and moderate liberals as well as for moderate and staunch conservatives, whereas tests in the remaining columns are tests of the null of equal coefficients across both sets of cases. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. The number of observations in the last four columns is lower because missing information in the source data (see the Data Appendix for details).

**Appendix Table A.6: Replication of Table 2, Excluding Opinion Writers' Votes**

	Conservative Vote						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pivotal × Ideology		0.299*** (0.031)	0.300*** (0.031)	0.067** (0.031)	0.087*** (0.028)	0.080*** (0.029)	0.073** (0.030)
Ideology	0.324*** (0.013)	0.289*** (0.031)	0.288*** (0.013)				
Pivotal		-0.062** (0.027)	-0.040 (0.033)	0.006 (0.025)	0.004 (0.021)	0.002 (0.023)	0.005 (0.022)
Constant	0.301*** (0.009)	0.308*** (0.009)					
Fixed Effects:							
Close Case	No	No	Yes	No	No	No	No
Justice × Close Case	No	No	No	Yes	No	No	No
Justice × Close Case × Issue Area	No	No	No	No	Yes	Yes	Yes
Justice × Natural Court	No	No	No	No	No	Yes	No
Justice × Natural Court × Issue Area	No	No	No	No	No	No	Yes
R-Squared	0.046	0.053	0.053	0.125	0.177	0.187	0.226
Number of Observations	55,832	55,832	55,832	55,832	55,832	55,832	55,832

*Notes:* Entries are coefficients and standard errors from estimating variants of the empirical model in equation (1) by OLS. In a departure from the results reported in the main text, the sample excludes the votes of the opinion writer and cases in which the majority opinion is unsigned. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.7: Replication of Table 3, Excluding Opinion Writers' Votes**

*A. Vote on the Merits*

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Ideology × Pivotal for Disposition	0.087*** (0.028)	0.073** (0.030)			-0.017 (0.039)	-0.022 (0.040)
Pivotal for Disposition	0.004 (0.021)	0.005 (0.022)			0.044 (0.030)	0.041 (0.029)
Ideology × Pivotal for Precedent			0.113*** (0.020)	0.101*** (0.021)	0.122*** (0.028)	0.112*** (0.028)
Pivotal for Precedent			-0.027 (0.016)	-0.023 (0.017)	-0.047** (0.023)	-0.042* (0.023)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.177	0.226	0.177	0.226	0.177	0.226
Number of Observations	55,832	55,832	55,832	55,832	55,832	55,832

*B. Disagreement with Majority Opinion*

	Issue Special Concurrence					
	(7)	(8)	(9)	(10)	(11)	(12)
Pivotal for Disposition	0.044*** (0.004)	0.047*** (0.005)			0.118*** (0.010)	0.120*** (0.011)
Pivotal for Precedent			-0.032*** (0.005)	-0.031*** (0.005)	-0.085*** (0.009)	-0.085*** (0.009)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.040	0.089	0.040	0.089	0.047	0.096
Number of Observations	55,832	55,832	55,832	55,832	55,832	55,832

*Notes:* Entries are coefficients and standard errors that differentiate between whether a justice was pivotal for the disposition of the case or for the majority opinion setting legal precedent. In a departure from the results reported in the main text, the sample excludes the votes of the opinion writer and cases in which the majority opinion is unsigned. Within each pair of regressions, the specification in the column on the left includes justice-by-close-case-by-court fixed effects, while that on the right accounts for issue- and term-specific justice-by-close-case-by-court fixed effects. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.8: Replication of Table 4, Excluding Opinion Writers' Votes**

	Conservative Vote			
	(1)	(2)	(3)	(4)
Ideology × Pivotal for Precedent	0.109***	0.108***		
× Dissent in Lower Court	(0.037)	(0.037)		
Ideology × Pivotal for Precedent	0.115***	0.100***		
× Unanimous Vote in Lower Court	(0.024)	(0.025)		
Pivotal for Disposition	-0.029	-0.033		
× Dissent in Lower Court	(0.029)	(0.027)		
Pivotal for Disposition	-0.026	-0.020		
× Unanimous Vote in Lower Court	(0.018)	(0.020)		
Ideology × Pivotal for Precedent			0.086*	0.077
× Conflict among Lower Courts			(0.024)	(0.048)
Ideology × Pivotal for Precedent			0.122***	0.108***
× No Conflict among Lower Courts			(0.021)	(0.022)
Pivotal for Disposition			-0.025	-0.017
× Conflict among Lower Courts			(0.036)	(0.038)
Pivotal for Disposition			-0.028*	-0.024
× No Conflict among Lower Courts			(0.017)	(0.017)
H <sub>0</sub> : Equal Coefficients [p-value]	0.886	0.865	0.447	0.534
Fixed Effects:				
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes
R-Squared	0.177	0.226	0.177	0.226
Number of Observations	55,824	55,824	55,832	55,832

*Notes:* Entries are coefficients and standard errors on  $\delta$  in equation (1), which is allowed to vary based on whether the judges on the lower court deciding the same case were split (columns (1) and (2)), and whether different lower courts had previously issued contradictory rulings on the same legal question (columns (3) and (4)). In a departure from the results reported in the main text, the sample excludes the votes of the opinion writer and cases in which the majority opinion is unsigned. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.9: Replication of Table A.1, Excluding Opinion Writers' Votes**

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Pivotal for Precedent	-0.023*	-0.028**				
× Staunch Liberal	(0.012)	(0.014)				
Pivotal for Precedent	0.009	0.022				
× Moderate Liberal	(0.021)	(0.023)				
Pivotal for Precedent	0.030**	0.030*				
× Moderate Conservative	(0.015)	(0.016)				
Pivotal for Precedent	0.077***	0.067***				
× Staunch Conservative	(0.013)	(0.014)				
Ideology × Pivotal for Precedent			0.187***	0.169***		
× Landmark Case			(0.061)	(0.061)		
Ideology × Pivotal for Precedent			0.109***	0.099***		
× Not Landmark Case			(0.021)	(0.022)		
Pivotal for Precedent			-0.101**	-0.088**		
× Landmark Case			(0.042)	(0.042)		
Pivotal for Precedent			-0.020	-0.018		
× Not Landmark Case			(0.017)	(0.018)		
Ideology × Pivotal for Precedent					0.160***	0.171***
× Newspaper Coverage					(0.022)	(0.023)
Ideology × Pivotal for Precedent					0.115***	0.074**
× No Newspaper Coverage					(0.030)	(0.032)
Pivotal for Precedent					-0.058***	-0.066***
× Newspaper Coverage					(0.021)	(0.022)
Pivotal for Precedent					-0.040**	-0.031*
× No Newspaper Coverage					(0.016)	(0.017)
H <sub>0</sub> : Staunch = Moderate [p-value]	0.000	0.000	--	--	--	--
H <sub>0</sub> : Equal Coefficients [p-value]	--	--	0.117	0.192	0.466	0.035
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.177	0.226	0.181	0.229	0.189	0.234
Number of Observations	55,832	55,832	50,896	50,896	43,855	43,855

*Notes:* Entries are coefficients and standard errors from estimating variants of the model in equation (1). Coefficients are allowed to vary based on a justice's ideological leaning (columns (1) and (2)), whether the case is a "landmark" case according to Savage (2010) (columns (3) and (4)), and whether the case received any coverage in the LA Times, Washington Post, or New York Times prior to the decision (columns (5) and (6)). In a departure from the results reported in Table A.1, the sample excludes the votes of the opinion writer and cases in which the majority opinion is unsigned. Hypothesis tests in the first two columns refer to the joint null that the effect of being pivotal is the same for staunch and moderate liberals as well as for moderate and staunch conservatives, whereas tests in the remaining columns are tests of the null of equal coefficients across both sets of cases. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. The number of observations in the last four columns is lower because missing information in the source data (see the Data Appendix for details).

**Appendix Table A.10: Replication of Table 2, Using Epstein et al.'s (2013) Coding of Case Outcomes**

	Conservative Vote						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pivotal × Ideology		0.278*** (0.034)	0.278*** (0.034)	0.079** (0.035)	0.088*** (0.032)	0.081** (0.033)	0.074** (0.033)
Ideology	0.346*** (0.014)	0.313*** (0.014)	0.313*** (0.014)				
Pivotal		-0.059** (0.029)	-0.037 (0.037)	-0.006 (0.029)	-0.002 (0.026)	-0.004 (0.027)	-0.000 (0.027)
Constant	0.297*** (0.010)	0.304*** (0.010)					
Fixed Effects:							
Close Case	No	No	Yes	No	No	No	No
Justice × Close Case	No	No	No	Yes	No	No	No
Justice × Close Case × Issue Area	No	No	No	No	Yes	Yes	Yes
Justice × Natural Court	No	No	No	No	No	Yes	No
Justice × Natural Court × Issue Area	No	No	No	No	No	No	Yes
R-Squared	0.052	0.058	0.058	0.127	0.179	0.190	0.222
Number of Observations	72,011	72,011	72,011	72,011	72,011	72,011	72,011

*Notes:* Entries are coefficients and standard errors from estimating variants of the empirical model in equation (1) by OLS. In a departure from the results reported in the main text, we use the coding scheme suggested by Epstein et al. (2013) to classify votes as either liberal or conservative. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.11: Replication of Table 3, Using Epstein et al.'s (2013) Coding of Case Outcomes**

*A. Vote on the Merits*

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Ideology × Pivotal for Disposition	0.088*** (0.032)	0.074** (0.033)			0.005 (0.044)	-0.004 (0.044)
Pivotal for Disposition	-0.002 (0.026)	-0.000 (0.027)			0.022 (0.035)	0.024 (0.035)
Ideology × Pivotal for Precedent			0.098*** (0.020)	0.089*** (0.021)	0.097*** (0.027)	0.091*** (0.028)
Pivotal for Precedent			-0.019 (0.016)	-0.018 (0.016)	-0.029 (0.022)	-0.028 (0.022)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.179	0.222	0.179	0.222	0.179	0.222
Number of Observations	72,011	72,011	72,011	72,011	72,011	72,011

*B. Disagreement with Majority Opinion*

	Issue Special Concurrence					
	(7)	(8)	(9)	(10)	(11)	(12)
Pivotal for Disposition	0.035*** (0.004)	0.038*** (0.004)			0.099*** (0.008)	0.100*** (0.008)
Pivotal for Precedent			-0.031*** (0.004)	-0.030*** (0.004)	-0.073*** (0.007)	-0.072*** (0.007)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.032	0.071	0.032	0.072	0.038	0.077
Number of Observations	72,011	72,011	72,011	72,011	72,011	72,011

*Notes:* Entries are coefficients and standard errors that differentiate between whether a justice was pivotal for the disposition of the case or for the majority opinion setting legal precedent. In a departure from the results reported in the main text, we use the coding scheme suggested by Epstein et al. (2013) to classify votes as either liberal or conservative. Within each pair of regressions, the specification in the column on the left includes justice-by-close-case-by-court fixed effects, while that on the right accounts for issue- and term-specific justice-by-close-case-by-court fixed effects. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.



**Appendix Table A.12: Replication of Table 4, Using Epstein et al.'s (2013) Coding of Case Outcomes**

	Conservative Vote			
	(1)	(2)	(3)	(4)
Ideology × Pivotal for Precedent	0.098***	0.099***		
× Dissent in Lower Court	(0.036)	(0.035)		
Ideology × Pivotal for Precedent	0.098***	0.087***		
× Unanimous Vote in Lower Court	(0.023)	(0.024)		
Pivotal for Disposition	-0.022	-0.030		
× Dissent in Lower Court	(0.028)	(0.026)		
Pivotal for Disposition	-0.018	-0.015		
× Unanimous Vote in Lower Court	(0.017)	(0.018)		
Ideology × Pivotal for Precedent			0.055	0.066
× Conflict among Lower Courts			(0.045)	(0.047)
Ideology × Pivotal for Precedent			0.109***	0.096***
× No Conflict among Lower Courts			(0.021)	(0.021)
Pivotal for Disposition			-0.013	-0.020
× Conflict among Lower Courts			(0.036)	(0.039)
Pivotal for Disposition			-0.020	-0.018
× No Conflict among Lower Courts			(0.016)	(0.016)
H <sub>0</sub> : Equal Coefficients [p-value]	0.994	0.769	0.243	0.530
Fixed Effects:				
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes
R-Squared	0.179	0.222	0.179	0.222
Number of Observations	71,993	71,993	72,011	72,011

*Notes:* Entries are coefficients and standard errors on  $\delta$  in equation (1), which is allowed to vary based on whether the judges on the lower court deciding the same case were split (columns (1) and (2)), and whether different lower courts had previously issued contradictory rulings on the same legal question (columns (3) and (4)). In a departure from the results reported in the main text, we use the coding scheme suggested by Epstein et al. (2013) to classify votes as either liberal or conservative. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.13: Replication of Table A.1, Using Epstein et al.'s (2013) Coding of Case Outcomes**

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Pivotal for Precedent	-0.019	-0.020				
× Staunch Liberal	(0.012)	(0.013)				
Pivotal for Precedent	0.017	0.023				
× Moderate Liberal	(0.020)	(0.021)				
Pivotal for Precedent	0.027	0.020				
× Moderate Conservative	(0.017)	(0.018)				
Pivotal for Precedent	0.072***	0.064***				
× Staunch Conservative	(0.014)	(0.014)				
Ideology × Pivotal for Precedent			0.123**	0.115**		
× Landmark Case			(0.056)	(0.054)		
Ideology × Pivotal for Precedent			0.098***	0.090***		
× Not Landmark Case			(0.021)	(0.022)		
Pivotal for Precedent			-0.076*	-0.071*		
× Landmark Case			(0.039)	(0.038)		
Pivotal for Precedent			-0.014	-0.014		
× Not Landmark Case			(0.016)	(0.017)		
Ideology × Pivotal for Precedent					0.126***	0.139***
× Newspaper Coverage					(0.019)	(0.020)
Ideology × Pivotal for Precedent					0.114***	0.082***
× No Newspaper Coverage					(0.029)	(0.031)
Pivotal for Precedent					-0.038*	-0.051**
× Newspaper Coverage					(0.020)	(0.020)
Pivotal for Precedent					-0.041**	-0.032*
× No Newspaper Coverage					(0.019)	(0.019)
H <sub>0</sub> : Staunch = Moderate [p-value]	0.000	0.000	--	--	--	--
H <sub>0</sub> : Equal Coefficients [p-value]	--	--	0.105	0.160	0.761	0.178
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.179	0.222	0.183	0.225	0.192	0.232
Number of Observations	72,011	72,011	66,203	66,203	57,733	57,733

*Notes:* Entries are coefficients and standard errors from estimating variants of the model in equation (1). Coefficients are allowed to vary based on a justice's ideological leaning (columns (1) and (2)), whether the case is a "landmark" case according to Savage (2010) (columns (3) and (4)), and whether the case received any coverage in the LA Times, Washington Post, or New York Times prior to the decision (columns (5) and (6)). In a departure from the results reported in Table A.1, we use the coding scheme suggested by Epstein et al. (2013) to classify votes as either liberal or conservative. Hypothesis tests in the first two columns refer to the joint null that the effect of being pivotal is the same for staunch and moderate liberals as well as for moderate and staunch conservatives, whereas tests in the remaining columns are tests of the null of equal coefficients across both sets of cases. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. The number of observations in the last four columns is lower because missing information in the source data (see the Data Appendix for details).

**Appendix Table A.14: Replication of Table 2, Using Sample Restrictions of McGuire et al. (2009)**

	Conservative Vote						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Pivotal × Ideology		0.398** (0.030)	0.397** (0.030)	0.282** (0.052)	0.272** (0.048)	0.239** (0.046)	0.231** (0.048)
Ideology	0.409** (0.016)	0.365** (0.016)	0.366** (0.016)				
Pivotal		-0.141** (0.022)	-0.188** (0.052)	-0.172** (0.050)	-0.148** (0.044)	-0.131** (0.043)	-0.125** (0.044)
Constant	0.239** (0.012)	0.253** (0.011)					
Fixed Effects:							
Close Case	No	No	Yes	No	No	No	No
Justice × Close Case	No	No	No	Yes	No	No	No
Justice × Close Case × Issue Area	No	No	No	No	Yes	Yes	Yes
Justice × Natural Court	No	No	No	No	No	Yes	No
Justice × Natural Court × Issue Area	No	No	No	No	No	No	Yes
R-Squared	0.073	0.081	0.082	0.142	0.203	0.223	0.272
Number of Observations	38,264	38,264	38,264	38,264	38,264	38,264	38,264

*Notes:* Entries are coefficients and standard errors from estimating variants of the empirical model in equation (1) by OLS. In a departure from the results reported in the main text, we apply the sample restrictions suggested by McGuire et al. (2009). Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.15: Replication of Table 3, Using Sample Restrictions of McGuire et al. (2009)**

*A. Vote on the Merits*

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Ideology × Pivotal for Disposition	0.272*** (0.048)	0.231*** (0.048)			0.108* (0.059)	0.111* (0.061)
Pivotal for Disposition	-0.148*** (0.044)	-0.125*** (0.044)			-0.071 (0.046)	-0.064 (0.049)
Ideology × Pivotal for Precedent			0.232*** (0.029)	0.183*** (0.028)	0.187*** (0.036)	0.138*** (0.035)
Pivotal for Precedent			-0.117*** (0.024)	-0.096*** (0.023)	-0.087*** (0.023)	-0.069*** (0.024)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.203	0.272	0.203	0.272	0.203	0.272
Number of Observations	38,264	38,264	38,264	38,264	38,264	38,264

*B. Disagreement with Majority Opinion*

	Issue Special Concurrence					
	(7)	(8)	(9)	(10)	(11)	(12)
Pivotal for Disposition	0.031*** (0.004)	0.040*** (0.005)			0.094*** (0.010)	0.100*** (0.011)
Pivotal for Precedent			-0.034*** (0.005)	-0.029*** (0.005)	-0.072*** (0.009)	-0.069*** (0.009)
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.044	0.105	0.045	0.106	0.050	0.110
Number of Observations	38,264	38,264	38,264	38,264	38,264	38,264

*Notes:* Entries are coefficients and standard errors that differentiate between whether a justice was pivotal for the disposition of the case or for the majority opinion setting legal precedent. In a departure from the results reported in the main text, we apply the sample restrictions suggested by McGuire et al. (2009). Within each pair of regressions, the specification in the column on the left includes justice-by-close-case-by-court fixed effects, while that on the right accounts for issue- and term-specific justice-by-close-case-by-court fixed effects. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.16: Replication of Table 4, Using Sample Restrictions of McGuire et al. (2009)**

	Conservative Vote			
	(1)	(2)	(3)	(4)
Ideology × Pivotal for Precedent	0.214***	0.175***		
× Dissent in Lower Court	(0.040)	(0.036)		
Ideology × Pivotal for Precedent	0.236***	0.185***		
× Unanimous Vote in Lower Court	(0.033)	(0.034)		
Pivotal for Disposition	-0.097***	-0.086***		
× Dissent in Lower Court	(0.033)	(0.031)		
Pivotal for Disposition	-0.123***	-0.099***		
× Unanimous Vote in Lower Court	(0.026)	(0.026)		
Ideology × Pivotal for Precedent			0.087	0.071
× Conflict among Lower Courts			(0.062)	(0.060)
Ideology × Pivotal for Precedent			0.262***	0.206***
× No Conflict among Lower Courts			(0.030)	(0.029)
Pivotal for Disposition			-0.069	-0.059
× Conflict among Lower Courts			(0.045)	(0.048)
Pivotal for Disposition			-0.126***	-0.102***
× No Conflict among Lower Courts			(0.024)	(0.023)
H <sub>0</sub> : Equal Coefficients [p-value]	0.618	0.830	0.003	0.022
Fixed Effects:				
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes
R-Squared	0.203	0.272	0.204	0.272
Number of Observations	38,264	38,264	38,264	38,264

*Notes:* Entries are coefficients and standard errors on  $\delta$  in equation (1), which is allowed to vary based on whether the judges on the lower court deciding the same case were split (columns (1) and (2)), and whether different lower courts had previously issued contradictory rulings on the same legal question (columns (3) and (4)). In a departure from the results reported in the main text, we apply the sample restrictions suggested by McGuire et al. (2009). Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Appendix Table A.17: Replication of Table A.1, Using Sample Restrictions of McGuire et al. (2009)**

	Conservative Vote					
	(1)	(2)	(3)	(4)	(5)	(6)
Pivotal for Precedent	-0.098***	0.075***				
× Staunch Liberal	(0.019)	(0.019)				
Pivotal for Precedent	-0.075***	-0.058**				
× Moderate Liberal	(0.026)	(0.026)				
Pivotal for Precedent	-0.002	-0.024				
× Moderate Conservative	(0.030)	(0.031)				
Pivotal for Precedent	0.104***	0.086***				
× Staunch Conservative	(0.020)	(0.021)				
Ideology × Pivotal for Precedent			0.255***	0.213***		
× Landmark Case			(0.070)	(0.070)		
Ideology × Pivotal for Precedent			0.231***	0.179***		
× Not Landmark Case			(0.030)	(0.029)		
Pivotal for Precedent			-0.165***	-0.132***		
× Landmark Case			(0.044)	(0.041)		
Pivotal for Precedent			-0.119***	-0.098***		
× Not Landmark Case			(0.025)	(0.024)		
Ideology × Pivotal for Precedent					0.236***	0.206***
× Newspaper Coverage					(0.035)	(0.033)
Ideology × Pivotal for Precedent					0.212***	0.143***
× No Newspaper Coverage					(0.041)	(0.039)
Pivotal for Precedent					-0.096***	-0.092***
× Newspaper Coverage					(0.033)	(0.031)
Pivotal for Precedent					-0.136***	-0.101***
× No Newspaper Coverage					(0.032)	(0.032)
H <sub>0</sub> : Staunch = Moderate [p-value]	0.000	0.000	--	--	--	--
H <sub>0</sub> : Equal Coefficients [p-value]	--	--	0.490	0.721	0.054	0.063
Fixed Effects:						
Justice × Close Case × Issue Area	Yes	Yes	Yes	Yes	Yes	Yes
Justice × Natural Court × Issue Area	No	Yes	No	Yes	No	Yes
R-Squared	0.204	0.272	0.209	0.275	0.217	0.280
Number of Observations	38,264	38,264	35,270	35,270	30,943	30,943

*Notes:* Entries are coefficients and standard errors from estimating variants of the model in equation (1). Coefficients are allowed to vary based on a justice's ideological leaning (columns (1) and (2)), whether the case is a "landmark" case according to Savage (2010) (columns (3) and (4)), and whether the case received any coverage in the LA Times, Washington Post, or New York Times prior to the decision (columns (5) and (6)). In a departure from the results reported in Table A.1, we apply the sample restrictions suggested by McGuire et al. (2009). Hypothesis tests in the first two columns refer to the joint null that the effect of being pivotal is the same for staunch and moderate liberals as well as for moderate and staunch conservatives, whereas tests in the remaining columns are tests of the null of equal coefficients across both sets of cases. Standard errors are clustered by Supreme Court term and reported in parentheses. \*\*\*, \*\* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. The number of observations in the last four columns is lower because missing information information in the source data (see the Data Appendix for details).