

Does the Median Justice Control  
the Content of Supreme Court Opinions?

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**Abstract**

A commonly-held view of Supreme Court decision-making is that the median justice on the Court controls the content of opinions. This view rests on an application of median voter theorem – typically applied to legislative decision-making or party positioning – in the judicial context. We argue that the judicial context often involves decision problems that differ from these more familiar applications of median voter theory in ways that make a straightforward application of the median voter theorem inappropriate. In particular, judges simultaneously vote on an outcome (the judgment) and sign onto a rationale (the opinion). We demonstrate that if judicial preferences across these two aspects of a case are discontinuous – that is, if justices do not switch their vote on the outcome in exchange for concessions on rationale – the median justice typically does not determine the content of Supreme Court decisions. We offer an alternative account of the location of influence on decision content. Finally, we offer empirical evidence that demonstrates the inadequacy of median justice theory, and suggests support for our alternative account.

## **Introduction**

One great challenge for the empirical study of law is how to determine what the “law” embodied in a judicial decision is. While it is relatively easy to code and compare case outcomes (i.e., who won and who lost), it is a different matter altogether to develop more substantive measures that place the “rule” embedded in a judicial opinion in policy space. In light of this difficulty, one common way of thinking about the “law” of a Supreme Court decision – both in academic literature and popular perception – rests on the intuition that the Court’s “center” or median justice should be the “swing vote” that can control the Court’s opinions (Schmidt and Yalof 2004). For example, until Sandra Day O’Connor’s retirement, it was commonplace to identify her preferences with the content of Supreme Court policy. (Rosen 2001.) Following her departure from the Court, Justice Kennedy is usually believed to play this pivotal role. In the academic literature, this intuition has been formalized in arguments that draw on the median voter theorem (Hotelling 1929) to argue that Supreme Court opinions will be written at the ideal point of median justice. (Epstein et al. 2005, Martin et al. 2005.)

The reasoning behind “median justice theory” (MJT) is powerful. If decision-makers confront a decision problem that can be represented by a single dimension (e.g., the left-right political spectrum), if individuals have single-peaked preferences, and if decisions are made by majority rule, the median voter is in a dominant position. Her vote is needed to obtain a majority, and thus she can hold out for her most preferred policy. For example, in the legislative context, we would expect that the median legislator can control legislative outcomes (Cite). In coalition bargaining, we expect median legislative parties to be in a particularly strong position for inclusion in a cabinet (Laver and Schofield 1990). Indeed, considerable empirical evidence reveals the influential position of the median in legislative settings (Cites). Moving to the judicial context, a common assumption has been that the same arguments apply. If judicial decisions – and in particular, Supreme Court cases – involve a single, dominant issue dimension, a straightforward appeal to the median-voter theorem suggests that the median justice should exercise decisive influence over the content of opinions. (Caminker 2004, Epstein et al. 2003, Martin et al. 2005.)

In this paper, we offer an empirical and theoretical challenge to the consensus about application of the median-justice theory to the content of judicial opinions. The lynchpin for our argument is the fact that judicial decision-making involves two distinct aspects, which has significant unexplored application to median justice theory. When the justices of the Supreme Court decide a case, they vote on not one, but two things: (a) which party wins or loses, which is embodied in the judgment of the Court; and (b) joining an opinion, which justifies the vote on the judgment. Importantly, the latter decision typically has the greatest significance for “the law,” because it is the justification of the majority opinion that becomes the rule that will govern the outcome of future cases, provided the opinion attracts sufficient votes to become binding precedent.

The (implicit) assumption among adherents of median justice theory is that the distinction between these aspects of a case is unimportant for the rule established in a case, because a justice writing an opinion for the Court must attract the median's vote for the judgment. (Hammond et al. 2005.) In order to do that, the writing justice will bargain with the median about the content of the opinion. This process ensures that the opinion (and hence the “rule” of the case) will ultimately be written at the point in policy space most preferred by the median justice. One implication of this approach is that opinion writers have little or no influence over the content of opinions – content is controlled by the median.<sup>1</sup> This immediately leads to a further implication, which will take on significance in the empirical section of this paper: If the median controls the content of opinions, the median justice has little reason to write concurring opinions. Her views already are reflected in the opinion of the court. For other justices in the majority, the incentive to write concurring opinions increases as they are further and further removed from the median and therefore less content with the content of the opinion.

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<sup>1</sup> There have, of course, been some challenges to this argument. As Lax and Cameron (2007) explain, the nature of language, which can make it difficult to state precise rules, can prevent perfect correspondence between the rule and the median's position. In addition, and related, opinion writing may be sticky. For reasons reflecting the cost of bargaining, or deference to one's colleagues, the opinion may ultimately rest somewhat closer to the ideal point of the opinion writer. (Maltzman et al. 2000, Lax and Cameron 2007, Hammond et al. 2005.) In both cases, however, the median justice still exercises considerably influence over the legal rule that is established. There is an ongoing debate over whether Supreme Court decisions rest closer to the median or the opinion writer (Hammond et al. 2005, Lax and Cameron 2007, Maltzman et al. 2000, Chris W. Bonneau, Thomas H. Hammond, Forrest Maltzman and Paul J. Wahlbeck 2007), but the approach here suggests neither may be the case.

Thus, if we plot concurrence behavior for justices in the majority, MJT theory predicts a V-shaped curve centered on the median justice. We return to this prediction below.

In contrast to the standard MJT account, we believe that the two-aspect nature of judicial decision-making is critical. The fact that justices must decide on both these issues can – and often will – drive a wedge between the content of opinions and the preferred position of the median justice.<sup>2</sup> There are two reasons. First, each justice who joins the Court’s judgment is free to concur on her own – and write separately – with respect to the rationale. Thus, an opinion writer who is unwilling to compromise with the median justice on the rationale of a majority opinion could – in principle – allow the median to write her own concurring opinion as long as the median continues to support the judgment. Of course, this tool has limits for the opinion writer. The opinion writer would prefer to secure a majority of votes for the opinion, in order for it to have precedential value. This provides reason to compromise. To the extent that the median justice’s vote is pivotal to the precedential value of the opinion, the median retains leverage over the language of the opinion. But – and this will be crucial in our analysis below – the same will be true of other justices in the majority as well.

The second, and more important, problem introduced by the distinction between judgment and rationale has to do with the relationship between these two aspects of a case in the decision-making process of justices. Our critical intuition is that – in many cases – justices’ preferences over these two aspects of a case can be characterized by what game-theorists refer to as *lexicographic preferences*. A justice’s preferred rule (or rationale) for deciding a case implies which party ought to win the case, i.e., it implies a particular judgment. While judges are willing to compromise and bargain over rules, we believe it is plausible to assume that they are *not* willing to modify their view of the appropriate rule to such an extent that the new rule leads them to “switch sides” on the judgment. Put differently, judges will bargain over the precise rationale that sustains a particular judgment, but they are highly unlikely to change their minds about the appropriate judgment itself. Applied to the median justice, this means that she may

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<sup>2</sup> This intuition is largely, but not entirely, absent from the literature. Westerland 2003 makes the same point, but – we believe – bases it on the unpersuasive view that there are costs associated with changing one’s conference vote. (See also Segal and Westerland 2005.) Spriggs and Hansford 2002 use the median member of the majority opinion’s ideal point as a “reasonable” proxy of where the law sits, but do not theorize or develop the point.

dislike the way a majority opinion is being written. But she will not be willing to bolt on the judgment of the Court. Instead, she may simply write her own opinion, concurring in the judgment and offering her own rationale. As we demonstrate below, one consequence of this is that the median loses leverage over the opinion itself, and median justice theory fails.

An example may help to illustrate. Suppose the Supreme Court is deciding a capital case involving the question of whether a jury is entitled to hear "victim impact" evidence, i.e. evidence from the victim's family or others about the emotional impact of the crime. The trial judge in the case admitted such evidence, and the jury imposed the death sentence. The appellate court affirmed. Thus, the "judgment" question before the Supreme Court is whether to uphold or reverse the death sentence. The "opinion" question is whether (and to what extent, or under what circumstances) victim impact evidence should be admissible. Suppose there are four votes on the Court to reverse the death sentence on the grounds that victim impact evidence is never admissible, and four votes to affirm on the ground that it is always admissible. In the middle is the median, who votes to reverse the sentence because she does not believe that the death penalty is appropriate in the particular case. However, when she sees the draft opinion for the Court, she disagrees: in her view victim impact evidence ought sometimes to be admissible, while the draft opinion argues that it never should be.

Under standard median justice theory, bargaining would now commence for the vote of the median justice. Those seeking to affirm would moderate their view on the admissibility of impact evidence, hoping to attract the median justice, who might vote to uphold the death sentence. Those seeking to reverse would tone down their rule in order to prevent the median's defection. But is it plausible to believe that those voting to uphold the death sentence would gain the vote of the median justice if they moderate their standard a bit? We think such an outcome vanishingly rare. Our intuition is that – at least in high stakes cases like this – the median simply will not be willing to change her vote on whether this particular defendant should go to his death even if the authors of that opinion are more accommodating. If she thinks the defendant ought not be executed, she will not trade a vote to execute him in exchange for an opinion written differently. But if this is so, the median cannot credibly threaten to desert the justices voting to reverse. It

then follows that they will not alter their opinion to hold the median vote on the judgment. What most likely will happen is that the median simply will go her own way on the content of the rule.

In the next section, we develop our intuition using a model of judicial decision-making that starts from the distinction between judgment and opinion, or rationale, and incorporates the possibility of writing concurring opinions. The model demonstrates that the influence of the median justice over opinion content is limited. Instead, our model predicts that opinion writers – and in particular opinion writers located at the center of the majority coalition – will have disproportional influence over the content of opinions. Following our theoretical exposition, we turn to the empirical evidence, focusing on patterns of concurring opinions. If median justice theory is correct, the median justice should never concur, and as the justices move in ideological distance from the median justice, the likelihood of concurring increases. In contrast, our theory predicts an increasing rate of concurrences moving from the opinion writer towards the minority, and an ambiguous relationship between the opinion writer and the most extreme members of the majority. The empirical evidence is unequivocally inconsistent with median justice theory. The evidence for our alternative – the importance of the opinion median – is substantial.

### **Modeling a Collegial Court**

In this section, we outline a simple model of collegial decision-making. We model a five member court confronted with the task of deciding a case. Doing so requires the justices make two analytically distinct decisions: First, they must decide which party wins the particular dispute. This, the decision on the judgment, is binary. Second, they must decide on the proper *rule* for sustaining the judgment of the case. The decision on the rule is continuous in the sense that a range of different rationales could be offered to sustain the decision. Accordingly, we model this part of the decision in a simple, one-dimensional spatial framework, assuming that each justice has a most preferred rule for handling the particular case (the justice's ideal point, denoted by  $x_i$ ) and that justices prefer rules that are closer to their ideal point to rules that are further away. The rule that the court settles on is expressed in the Court's opinion, but each justice in the majority

supporting the winning disposition of the case retains the right to write a concurrence to articulate her preferred rule if she would like to do so.

As we argued above, central to our analysis is the assumption that for justices, the decision on the disposition of the case takes precedence over the decision on the rule: Each justice first decides which party ought to win, and then decides what the proper rationale is for that decision. Justices are not willing to trade-off concession on the rule for a switch in their vote on the disposition of the case. This assumption implies that the five members of the court divide into two coalitions: Those who believe the petitioner should prevail, and those who do not. One of these groups will have a majority, thus ensuring that its position on disposition is the collective decision of the court. This majority coalition must then write an opinion that outlines the rationale for the court's judgment. Importantly, while justices in the majority coalition agree on the disposition of the case, they may disagree on what the proper rule sustaining that disposition is – that is, they may have different ideal points. Several questions therefore arise: How do the members of the majority coalition bargain over the opinion? Which justices are particularly influential in this process? Under what circumstances would we expect a majority opinion to attract sufficient votes to create precedent? And when will justices in the majority coalition choose to write separate concurrences?

To answer these questions, we analyze a simple game with the following structure:

1. A case comes before the court. Preferences over the binary disposition of the case divide the justices into a minority and a majority coalition.
2. One justice in the majority coalition is assigned the task to write a (proposed) opinion to justify the disposition of the case. This proposal is denoted by  $p \in R$ .
3. The other justices in the majority coalition observe the proposed opinion. They decide whether to join the majority opinion. If the opinion receives a majority of votes (i.e., at least three), it creates binding precedent. Otherwise, it does not.

4. Each justice in the majority coalition decides whether to write a separate concurrence to explain any differences between their own preferred rule and the opinion.

We assume that justices in the majority coalition are motivated by two considerations. On the one hand, they care about the legal rule created in the decision, preferring that rules that create precedent be as close as possible to their own ideal point. In addition, justices have “expressive” preferences: They would like whatever statement they sign on to – whether in the majority opinion or a concurrence – to reflect their views accurately. There are a number of ways in which we can think about such “expressive” preferences. One particularly important consideration in the current context is that justices may expect that expression of their preferences sends signals to potential litigants and other policymakers about the disposition of future cases. Where a justice disagrees with a particular rule announced in an opinion, she may therefore want to signal her disagreement via a concurrence. The following utility function captures these considerations.<sup>3</sup>

$$U_i(p) = \begin{cases} L(K - (x_i - p)^2) - \beta_i(x_i - e_i)^2 - c & \text{if } i \text{ writes a concurrence} \\ L(K - (x_i - p)^2) - \beta_i(x_i - p)^2 & \text{if } i \text{ does not write a concurrence} \end{cases}$$

Consider each element of this utility function in turn, beginning with the utility for justice  $i$  if she writes a concurrence. The first term captures the policy payoff the justice receives from the adoption of a particular rule  $p$ , if that rule establishes binding precedent. Thus,  $L$  is an indicator variable that takes the value 1 if the opinion receives at least three votes (which are required to establish binding precedent). It takes the value 0 if the opinion does not receive at least three votes (and therefore does not establish binding precedent). The term in parentheses captures the value placed by the justice on the establishment of a particular binding precedent. This “policy payoff” is maximized if the opinion establishes the justice’s most preferred rule, yielding a payoff of  $K > 0$ . As the rule that is established is further and further from the justice’s ideal point, this payoff declines (and can turn negative).

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<sup>3</sup> Since our interest is in the court’s opinion, and because we assume that the decision on the disposition separates the justices into the two coalitions, we do not concern ourselves with justices in the minority.

The second term of the utility function captures the extent to which a justice cares about the extent to which she communicates her position, or most preferred rule, in a case. The expressive payoff declines as the justice’s public statement moves away from her ideal point. Thus, if a justice writes a separate concurrence, she has an opportunity to lay out her views on the particular case in her concurrence ( $e_i$ ). Her expressive payoff declines as the opinions expressed in her concurrence diverge from her most preferred rule. To write a concurrence, a justice must expend resources – effort and time that could have been spent elsewhere if she chooses to simply sign the majority opinion. The parameter  $c > 0$  captures these costs. Finally,  $\beta_i > 0$  is a parameter that indicates how much value the justice places on the expressive benefits. Importantly, we believe that it is substantively sensible to assume that  $\beta_i$  increases as a justice is located closer and closer to the court’s median [Cite?]. Justices who are closer to the median have greater opportunities to be influential in the court’s future decision-making. As a consequence, the potential benefits of correctly “advertising” their preferences to potential litigants and other policymakers are greater than for justices at the margin.

If the justice does not concur and simply signs the majority opinion, she is identified with the majority opinion – other policymakers and litigants have no information that allows them to distinguish her views from those expressed in the opinion. Her expressive payoff is therefore a function of the distance between the majority opinion and her ideal point, but she does not expend resources in writing a concurrence. We are now in a position to solve the model, identifying subgame-perfect equilibria. We restrict attention to pure strategies, and assume that justices do not play weakly dominated strategies.

### **Voting on the opinion**

Suppose a particular justice has been appointed to draft an opinion.<sup>4</sup> Consider the decision of each justice in the majority as to whether to join the proposed majority opinion. Since we are assuming that justices do not play weakly dominated strategies, each justice votes as if she were pivotal. She will therefore vote to support the majority

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<sup>4</sup> In the current context we abstract away from opinion assignment. The model can easily be extended to consider opinion assignment as well.

opinion if the following inequality holds, i.e. if she derives positive benefit from the establishment of a binding precedent stating the proposed rule:

$$K - (x_i - p)^2 \geq 0$$

$$\Leftrightarrow$$

$$p \in [x_i - \sqrt{K}, x_i + \sqrt{K}]$$

Thus, for each justice there exists an interval around her ideal point such that the justice will vote to support an opinion that falls within this interval, but will not join an opinion that is so far away from her preferred rule that it falls outside this interval.

This result has an immediate implication for the possibility of opinions that attract sufficient votes to generate binding precedent. Because an opinion requires three (out of five) votes to have precedential value, it is only possible to write an opinion that creates precedent if there exist three justices in the majority who are willing to sign on to the same opinion. Without loss of generality, order these justices by  $0 < x_1 < x_2 < x_3$ , and let the distance between two justices be denoted by  $d_{ij} = |x_i - x_j|$ . Then the following conditions must be met in order to create the “overlap” that allows a majority opinion:

- 1)  $x_3 - \sqrt{K} \leq x_1 + \sqrt{K} \Leftrightarrow d_{13} \leq 2\sqrt{K}$
- 2)  $x_3 - \sqrt{K} \leq x_2 + \sqrt{K} \Leftrightarrow d_{23} \leq 2\sqrt{K}$
- 3)  $x_2 - \sqrt{K} \leq x_1 + \sqrt{K} \Leftrightarrow d_{12} \leq 2\sqrt{K}$

Since justice 2 is located between justices 1 and 3, these conditions reduce to condition 1). Thus, it is only possible to generate a majority opinion that has precedential value if the ideological spread of the potential coalition is not too great.

### **Deciding to concur**

Now consider the decision by a justice to write a concurring opinion, given a particular proposed majority opinion. This decision depends on the expressive component of the justice’s utility function. By deciding to concur, she has an opportunity to express her opinion on the most preferred rule for disposing of the case. Thus, her utility from writing a concurrence is given by:

$$U_i(\text{concur}) = L(K - (x_i - p)^2) - \beta_i(x_i - e_i)^2 - c$$

The concurrence that maximizes this expression is to set  $e_i = x_i$ , that is, if the justice chooses to write a concurrence, she will write it at her ideal point. Alternatively, the

justice could choose not to write a concurrence, saving herself the resource cost  $c$ , but accepting the fact that she will be associated with the rule as expressed in the majority opinion:

$$U_i(\sim\text{concur}) = L(K - (x_i - p)^2) - \beta_i(x_i - p)^2$$

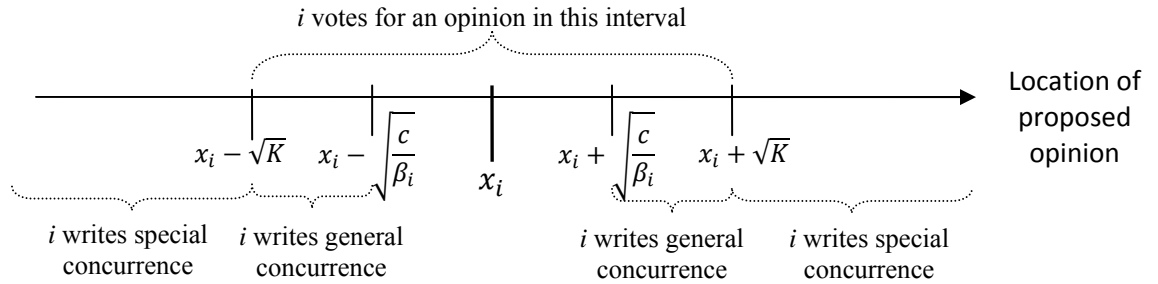
Thus, the justice will choose to concur if and only if the following condition is met:

$$\begin{aligned} -\beta_i(x_i - e_i)^2 - c &\geq -\beta_i(x_i - p)^2 \\ \Leftrightarrow \\ p &\notin \left[ x_i - \sqrt{\frac{c}{\beta_i}}, x_i + \sqrt{\frac{c}{\beta_i}} \right] \end{aligned}$$

In words, a justice will choose to write a concurrence when an opinion is sufficiently far away from her ideal point. The size of the interval within which a justice will not bother to concur increases as the cost of concurrence increases, and it declines as the justice places a higher value on the expression of her preferred rule – both results accord with intuition.

In summary, a justice’s decision to join the majority opinion and to write a separate concurrence are driven by how closely the proposed opinion reflects the justice’s ideal rule. Opinions that are sufficiently “close” will win the justice’s vote, and will not result in a concurrence. Substantively, it usually makes sense to assume that the “concurrence interval” is contained within the “join the opinion” interval – this ensures that a justice who does not vote for the majority opinion will publish a separate concurrence (a “special concurrence”). This condition is met if  $c < \beta_i K$ , i.e., if publishing a concurrence is not too costly. However, nothing in the model commits us to this relationship. We can imagine circumstances in which a justice might choose not to vote for the majority opinion, but also not publish a concurrence to explain her (competing) views (for example, towards the end of the term when time is short and the costs of a concurrence are high). The following figure illustrates the two decision intervals:

**Figure 1: Justice  $i$ ’s voting and concurrence decisions as a function of opinion location when  $c \leq \beta_i k$**



We can now consider the most interesting aspect of the model. Suppose a particular justice has been chosen to write the majority opinion. What will this justice propose?

### Proposing an Opinion

For a justice proposing an opinion, several considerations are in play. Ideally, a proposing justice would like to write an opinion at her ideal point that attracts sufficient votes to become binding precedent. Unfortunately, doing so may not be possible, since such an opinion may not receive sufficient votes from the other members of the majority coalition. Therefore the justice must weigh the trade-off between compromising on opinion content in order to attract necessary votes and writing at her ideal point and potentially losing the votes that will give the opinion precedential value.

One crucial aspect of this bargaining problem is that the number of votes necessary in order to create binding precedent is given by a majority of the *total* membership of the court, not just a majority of the members of the majority coalition. For example, if our model court splits 3-2 in a specific case, all *three* votes in the majority coalition are necessary in order to create precedent. We therefore need to consider two separate situations for the proposing justice: a situation in which all members of the majority coalition are necessary in order to create binding precedent (and the majority effectively operates under unanimity rule), and those in which the majority coalition contains “extra” members whose vote is not necessary to create precedent.

Consider the situation in which all members of the majority coalition are necessary to create precedent first. Without loss of generality, let the three justices in the majority coalition be the right most members of the court, and let their ideal points be ordered  $0 < x_1 < x_2 < x_3$ . (That is, justice 1 is the overall court median.) Let  $p_i$  indicate

proposer  $x_i$ 's equilibrium opinion. In equilibrium, the justices will propose the following opinions (We discuss the substantive interpretation below):

$$p_1 = \begin{cases} x_3 - \sqrt{K} & \text{if } \sqrt{K} < d_{13} \leq \sqrt{\frac{K}{1+\beta_1}} + \sqrt{K} \\ x_1 & \text{otherwise} \end{cases}$$

$$p_2 = \begin{cases} x_1 + \sqrt{K} & \text{if } d_{13} \leq 2\sqrt{K} \text{ and } \sqrt{K} < d_{12} \leq \sqrt{\frac{K}{1+\beta_2}} + \sqrt{K} \\ x_3 - \sqrt{K} & \text{if } d_{13} \leq 2\sqrt{K} \text{ and } \sqrt{K} < d_{23} \leq \sqrt{\frac{K}{1+\beta_2}} + \sqrt{K} \\ x_2 & \text{otherwise} \end{cases}$$

$$p_3 = \begin{cases} x_1 + \sqrt{K} & \text{if } \sqrt{K} < d_{13} \leq \sqrt{\frac{K}{1+\beta_3}} + \sqrt{K} \\ x_3 & \text{otherwise} \end{cases}$$

In equilibrium, the tradeoff between writing an opinion that reflects a justice's preferences as closely as possible and attracting sufficient support for an opinion that carries the weight of precedent leads the opinion writer to one of three possible proposals. If the preferences of the majority are sufficiently homogenous, the opinion writer can simply place the opinion at her ideal point ( $x_i$ ) and a majority will sign on. However, if the preferences of the majority are too heterogeneous, an opinion written at her ideal point will not receive majority support. Thus, the opinion writer must choose between compromising on the opinion to receive majority support or foregoing precedential value by writing an opinion at her ideal point, recognizing that she will not get majority support. Not surprisingly, the opinion writer is willing to compromise only if the preferences of the majority coalition are not "too" heterogeneous. (See Staudt, Friedman, and Epstein 2007.)

To illustrate these dynamics, consider judge 1's behavior. When preferences are sufficiently homogenous ( $\sqrt{K} \geq d_{13}$ ), judge 1 can propose her ideal point and judge 3 (the most extreme member) will sign the opinion. As preferences become moderately heterogeneous ( $\sqrt{K} < d_{13} \leq \sqrt{\frac{K}{1+\beta_1}} + \sqrt{K}$ ), judge 3 will no longer sign an opinion

written at judge 1's ideal point. However, since the opinion judge 3 will sign  $(x_3 - \sqrt{K})$  is sufficiently close to judge 1's ideal point, judge 1 compromises and writes an opinion that attracts majority support. Finally, when preferences are highly heterogenous,  $(d_{13} > \sqrt{\frac{K}{1+\beta_1}} + \sqrt{K})$ , the compromise required to get majority support is too unpalatable for judge 1, who chooses to propose her ideal point and accepts the fact that she will not receive majority support. The same dynamic plays out in the equilibrium proposals of judges 2 and 3.

Next, suppose the majority coalition supporting the judgment in the case is composed of a super-majority. As before, the judges face the tension between writing the opinion they want and the need to attract votes. The only thing that differs is that the opinion writer no longer needs all of the members of the majority to sign the opinion to create precedent. Thus, opinion writers have a little more latitude: If the majority coalition is sufficiently homogenous to allow the opinion writer to write at her ideal point while attracting all votes in the majority, the opinion writer does so. As the coalition becomes less homogeneous, the opinion writer will compromise to attract the votes of the "closest" majority required for precedential value. And as preferences diverge even further, the opinion writer ultimately gives up on writing a majority opinion and writes at her ideal point. More formally, the equilibrium proposals are given by (without loss of generality, let the four "closest" justices in the majority coalition be the right most members of the court, and let their ideal points be ordered  $0 < x_1 < x_2 < x_3 < x_4$ ):

$$p_1 = \begin{cases} x_3 - \sqrt{K} & \text{if } \sqrt{K} < d_{13} \leq \sqrt{\frac{K}{1+\beta_1}} + \sqrt{K} \\ x_1 & \text{otherwise} \end{cases}$$

$$p_2 = \begin{cases} x_1 + \sqrt{K} & \text{if } d_{13} \leq 2\sqrt{K}, x_2 \leq \frac{x_4 + x_1}{2}, \text{ and } \sqrt{K} < d_{12} \leq \sqrt{\frac{K}{1+\beta_2}} + \sqrt{K} \\ x_3 - \sqrt{K} & \text{if } d_{13} \leq 2\sqrt{K} \text{ and } \sqrt{K} < d_{23} \leq \sqrt{\frac{K}{1+\beta_2}} + \sqrt{K} \\ x_4 - \sqrt{K} & \text{if } d_{24} \leq 2\sqrt{K}, x_2 > \frac{x_4 + x_1}{2}, \text{ and } \sqrt{K} < d_{24} \leq \sqrt{\frac{K}{1+\beta_2}} + \sqrt{K} \\ x_2 & \text{otherwise} \end{cases}$$

$$p_3 = \begin{cases} x_1 + \sqrt{K} & \text{if } d_{13} \leq 2\sqrt{K}, x_3 \leq \frac{x_4 + x_1}{2}, \text{ and } \sqrt{K} < d_{13} \leq \sqrt{\frac{K}{1 + \beta_3}} + \sqrt{K} \\ x_2 + \sqrt{K} & \text{if } d_{24} \leq 2\sqrt{K} \text{ and } \sqrt{K} < d_{23} \leq \sqrt{\frac{K}{1 + \beta_3}} + \sqrt{K} \\ x_4 - \sqrt{K} & \text{if } d_{24} \leq 2\sqrt{K}, x_3 > \frac{x_4 + x_1}{2}, \text{ and } \sqrt{K} < d_{34} \leq \sqrt{\frac{K}{1 + \beta_3}} + \sqrt{K} \\ x_3 & \text{otherwise} \end{cases}$$

$$p_4 = \begin{cases} x_2 + \sqrt{K} & \text{if } \sqrt{K} < d_{24} \leq \sqrt{\frac{K}{1 + \beta_4}} + \sqrt{K} \\ x_4 & \text{otherwise} \end{cases}$$

One important substantive implication of the model is that the content of judicial opinions typically does *not* reflect the preferences of the median justice. Instead, judicial opinions will either a) reflect the preferences of the opinion writer, if the majority coalition is sufficiently homogenous in order to allow the opinion writer to write at her ideal point, or b) reflect the preferences of the member of the majority coalition that the opinion writer has to attract in order to sustain the majority. This may – but need not – be the median justice. This prediction stands in stark contrast to the conventional wisdom of median justice theory.

### Predicting Concurrence Behavior

Having established the content of opinions, we can now turn to the last aspect of judicial behavior, which will play a central role in the empirical analysis: concurrences. Recall that a justice concurs if and only if the proposed policy is not sufficiently close to that justice's ideal point, i.e.  $p \notin \left[ x_i - \sqrt{\frac{c}{\beta_i}}, x_i + \sqrt{\frac{c}{\beta_i}} \right]$ . A justice to the left of the proposed policy concurs if  $x_i + \sqrt{\frac{c}{\beta_i}} < p$ , and a justice to the right of the proposed policy concurs if  $x_i - \sqrt{\frac{c}{\beta_i}} > p$ . Furthermore, recall that the proposed opinion is located either at the ideal point of the opinion writer, or at a “constrained” opinion some distance from the opinion writer. Our analysis will proceed in two steps: First, we consider how ideological

distance between a justice and the opinion writer affects concurrence behavior. We then consider how these expectations are modified when we take into account the value judges place on expressive benefits. Recall that we have assumed that the majority coalition is located on the right side of the court. Thus, judges to the left of the opinion writer are closer to the dissenting minority, while judges located to the right are closer to the extremes of the court.

To see how distance from the opinion writer affects concurrence behavior, consider justice  $i$ , and suppose that the proposed opinion falls within the set  $\left[ x_i - \sqrt{\frac{c}{\beta_i}}, x_i + \sqrt{\frac{c}{\beta_i}} \right]$  so that  $i$  simply joins the majority opinion. Now imagine that the justice begins to move ideologically away from the opinion writer. If the opinion writer does not change the opinion, the proposed opinion will eventually fall outside of the interval, and justice  $i$  concurs. If the opinion writer does change the opinion (because she is accommodating justice  $i$  in order to retain sufficient votes), justice  $i$  may continue to join the opinion, but will eventually begin to write a general concurrence.<sup>5</sup> As the justice continues to diverge from the opinion writer, the opinion writer will eventually no longer accommodate her: Either she forms an alternative coalition with another subset of a supermajority, or she simply authors an opinion at her ideal point and accepts that the declared rule is not binding. In either case, justice  $i$  continues to concur. In short, as the ideological distance between a justice and the opinion writer increases, a justice incentive becomes more likely to concur.

How does the expressive value of concurring,  $\beta_i$ , affect these expectations? The primary impact of increasing  $\beta_i$  is to “shrink” the interval within which an opinion must lie in order for a justice to join the opinion. As outlined above, we believe that it is plausible to assume that expressive value is larger for justices that are located towards the

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<sup>5</sup> Recall that we assume a justice will start concurring before they will decline to sign the opinion. The comparative static prediction does not change if we make the opposite assumption. *Note:* throughout we refer to “special” and “general” concurrences, rather than the language of the Spaeth database, which uses the terms “special” and “regular”. The former are more commonly used in the law, and for a reason that bears upon our analysis. A justice who writes a “general” concurrences joins generally in the entire opinion of the majority or plurality coalition, but writes separately to offer additional explanation or clarification of her views. The other of a “special” concurrence, on the other hand, joins in the majority vote of the judgment, but not at all in the majority or plurality opinion, expressing her views entirely separately.

center of the court, because these justices are more likely to be influential in future cases and can therefore expect a greater impact from “signaling” their preferences to other actors. This implies that for justices between the opinion writer and the dissenting minority, the expressive value of concurring increases as we move closer to the minority. The effect of ideological distance from the opinion writer and the expressive value of concurring are therefore mutually reinforcing. For justices on the “outside” of the opinion writer, on the other hand, the opposite holds. While more ideologically extreme justices have a stronger incentive to concur, they also gain less expressive value out of the exercise. Thus, the model implies the following two hypotheses about concurrence behavior:<sup>6</sup>

**Hypothesis 1:** For justices between the opinion writer and the dissenting minority, the more ideologically distant the justice is from the opinion writer, the more likely that justice is to concur.

**Hypothesis 2:** For justices between the opinion writer and the right, the relationship between ideological distance from the opinion writer and concurrence behavior is ambiguous.

Both hypotheses stand in stark contrast to the implications of median justice theory, which predicts that concurrence behavior is a function of distance to the overall court median. It is now time to turn to the data to evaluate these competing claims.

## Data and Measures

Median justice theory and our theoretical account suggest divergent predictions for patterns of concurrences. MJT suggests that the median justice should never concur, while our account suggests the propensity to concur depends on the location of the

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<sup>6</sup> We could, of course, make different assumptions about factors that determine the value an individual judge places on expressive benefits. A particularly plausible alternative is that expressive benefits increase with distance from the opinion, i.e., the more a judge disagrees with the proposed opinion, the more expressive benefit she obtains from a concurrence. This assumption largely makes the  $\beta_i$ 's redundant. The empirical predictions about concurrence behavior we would obtain under this assumption are largely equivalent to the current hypotheses. Hypothesis 1 does not change at all. Hypothesis 2 will no longer predict an ambiguous relationship. Instead, we would predict that the likelihood of concurrence increases as a judge moves ideologically away from the opinion writer to the extremes of the court. The empirical results we report below are fully consistent with this alternative.

opinion writer. All of the data for our analysis come from the United States Supreme Court Judicial Database (Spaeth 2005).<sup>7</sup> We use data from the 1953 to the 2005 terms. The key variable of interest is whether a justice files a special concurrence or not in each case.<sup>8</sup>

The independent variables for our analyses are functions of the spatial locations of the justices; i.e., their distance from the median, from the opinion writer, and so on. For a preliminary look at the data, we focus on the final Rehnquist Court (1994-2004 terms) where there are a total of 874 cases. For all of the analyses that follow, we only include outcomes in which there is perfect spatial voting (with full participation) based on these estimates. We do so to minimize the possibility that the results might be contaminated by possible other issue dimensions and legal or extra-legal considerations. 606 cases out of the 874 cases in the Rehnquist dataset have perfect spatial voting. To locate the justices in ideological space, we estimate a one-dimensional item-response theory model using all of the merits votes (Clinton, Jackman, and Rivers 2004). The estimates are in Table 1. These estimates are used to rank the justices from the most liberal to the most conservative.

	Mean	SD
Stevens	-3.00	0.00
Ginsburg	-1.00	0.10
Souter	-0.81	0.10
Breyer	-0.74	0.09
O'Connor	0.39	0.07
Kennedy	0.57	0.08
Rehnquist	1.11	0.11
Thomas	2.65	0.26
Scalia	3.00	0.00

Table 1. Ideal point estimates for the Rehnquist Court, 1994-2004 terms. The mean is the posterior mean; SD is

<sup>7</sup> The unit of analysis is the case citation (ANALU=0). Decisions included are formally decided cases issued with written opinions after full oral argument and cases decided by an equally divided vote (DEC\_TYPE=1,5,6,7). After performing the selection, there are a total of 6203 cases from the 1953 to the 2005 terms (inclusive).

<sup>8</sup> The vote variables in the database record both special and general concurrences. We have repeated all of the analyses using both special and general concurrences and the results are substantively similar; see Table 4.

the posterior standard deviation. The model is identified by fixing Justice Stevens at -3 and Justice Scalia at 3.

For the analyses that consider the entirety of the dataset from 1953 to 2005, we start with 6203 cases in the dataset. When we restrict our attention to those that exhibit perfect spatial voting, we are left with 3151 cases. We use the Martin-Quinn scores to locate the justices in ideological space (Martin and Quinn 2002). These scores have the advantage over other measurement strategies because they are dynamic, allowing the location of each justice to evolve over time, and they have been shown to classify well across all issue areas. Since our dependent variable is not votes on the merits, there is no concern of endogeneity. We thus use the Martin-Quinn scores to order each justice in case from left to right, and to locate the opinion writer and median justice.

## **Results**

Our empirical strategy first consists of looking at patterns of concurrences. If the median justice theory were correct, we would rarely see concurrences by the median justice. In Figure 2 we plot the number of special concurrences for each justice in the Rehnquist dataset, whether they are in the majority coalition or not. Justice O'Connor filed special concurrences in nearly twenty cases; about the same number as Justices Souter, Kennedy, and Thomas. However, just looking at the number of concurrences may be misleading as a comparison among justices because some justices were in the minority (and thus not able to concur). Thus, in Table 2 we summarize the number of special concurrences for each coalition type in the dataset; e.g., all 5-4, 6-3, 7-2, 8-1, and unanimous coalitions. The nomenclature used in the table is "6-3 Right" coalition is a majority coalition of with Justices Breyer through Scalia. A "6-3 Left" Coalition is Justice Stevens through Kennedy, and so on.

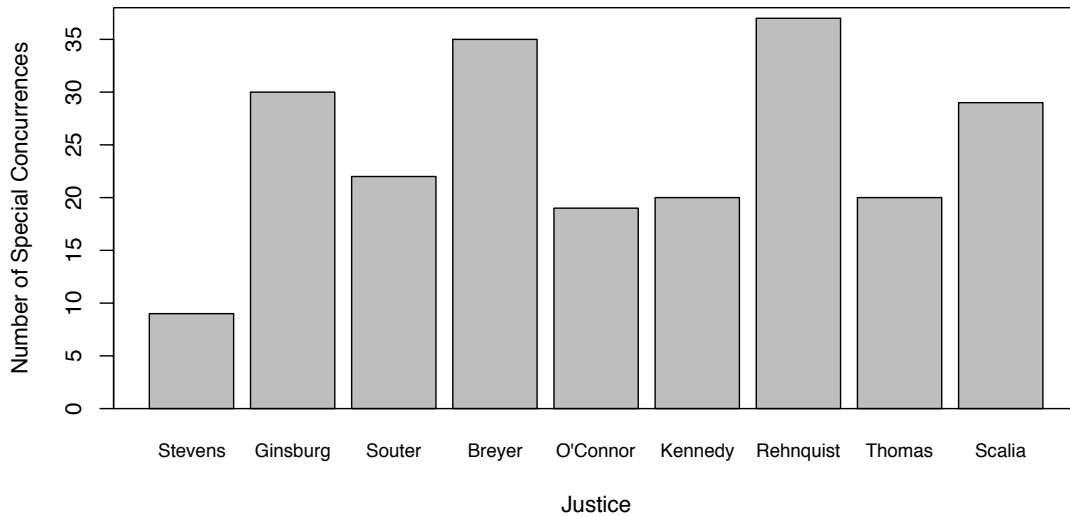


Figure 2. Number of special concurrences for each justice in the dataset for cases with perfect spatial voting. This does not control for the number of times each justice is in the majority coalition.

	5-4 Right	6-3 Right	7-2 Right	8-1 Right	Unan- imous	8-1 Left	7-2 Left	6-3 Left	5-4 Left
Stevens					6	0	0	0	0
Ginsburg				0	28	0	1	1	0
Souter			0	1	13	0	0	2	1
Breyer		2	2	4	25	0	0	0	0
O'Connor	5	1	2	1	5	0	1	4	0
Kennedy	0	0	1	2	15	0	1	0	
Rehnquist	4	2	1	4	24	2	0		
Thomas	0	0	0	3	15	0			
Scalia	0	5	3	2	17				
Number of Cases	82	17	16	38	358	5	30	28	32

Table 2. Number of special concurrences for cases with perfect spatial voting for the Rehnquist Court, 1994-2004 terms. Number of cases shows the total number of cases with the particular coalition structure.

There are some interesting patterns apparent in this table. While it is the case that Justice O'Connor concurs relatively rarely in unanimous decisions, she does concur

relatively frequently in situations where we would least expect it—in 5-4 Right coalitions. Indeed, while we see concurrences taking place along the ideological continuum for each type of coalition, there seems to be a pattern where the median of the coalition rarely concurs. These results suggest that the median justice theory is inadequate for understanding concurrence patterns on the Rehnquist Court.

Before turning to a multivariate model that can directly test our hypotheses, we next summarize the patterns of concurrence for the full dataset. Figure 3 shows the number of concurrences by the position of the justice, ranked left to right. Here, again, the median justice (Justice 5) concurs more than some others (in this case, the two justices to her right). When we break down the patterns of concurrences by coalition type in Table 3, we again see patterns inconsistent with the median justice theory. The patterns in the “Right” coalitions are especially striking. In these cases, the justices in the middle of the coalition are least likely to concur, whether or not they happen to be the median justice.

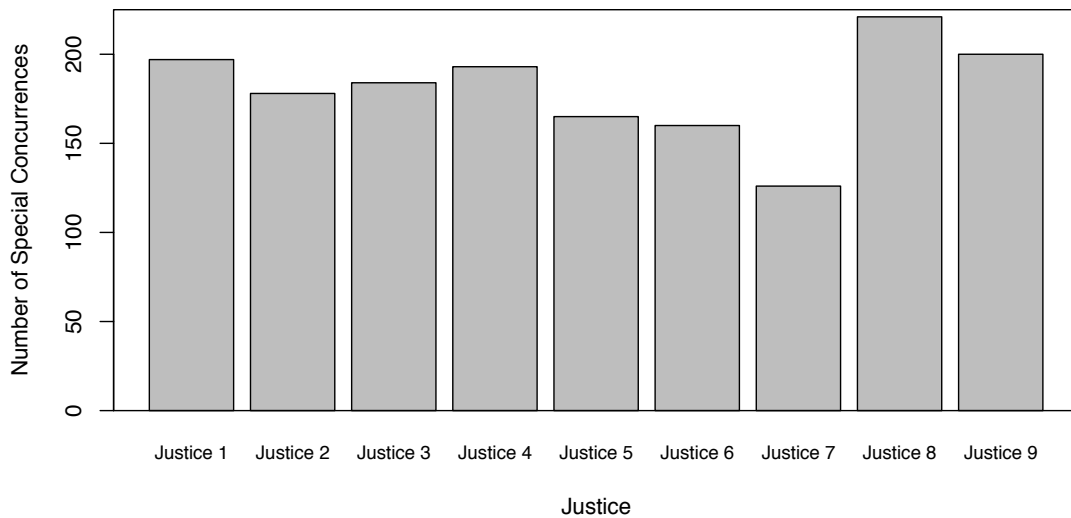


Figure 3. Number of special concurrences for each justice position in the dataset for cases with perfect spatial voting. This figure does not control for the number of times each justice is in the majority coalition.

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5-4	6-3	7-2	8-1	Unan-	8-1	7-2	6-3	5-4
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	Right	Right	Right	Right	imous	Left	Left	Left	Left
Justice 1					180	11	4	1	1
Justice 2				15	147	5	5	3	3
Justice 3			32	15	118	7	4	5	3
Justice 4		22	21	11	120	8	6	2	3
Justice 5	16	8	15	9	79	6	11	14	7
Justice 6	19	7	8	8	87	8	11	12	
Justice 7	9	5	4	5	78	15	10		
Justice 8	18	14	10	10	151	18			
Justice 9	11	6	10	13	160				
Number of Cases	333	231	181	183	1756	106	104	98	159

Table 3. Number of special concurrences for cases with perfect spatial voting for the 1953-2005 terms. Number of cases shows the total number of cases with the particular coalition structure.

The key empirical test of our theoretical model involves a multivariate model of concurrence behavior. After selecting cases with perfect spatial voting, we are left with 3151 cases for analysis. The dependent variable for our analysis  $Y_i$  indicates whether the justice voted to specially concur in a case or not. The units of analysis are decisions of justices to file a special concurrence (obviously: for any justice in the majority coalition who is not the opinion writer). After applying these rules, we are left with 17,725 justice decisions.

The median justice theory suggests that the concurrence is predicted by the distance from the median voter; as the distance from the justice to the median increases, so too does the probability the justice concurs. Let  $x_i$  denote the justice's ideal point and  $x_{M,i}$  denote the location of the median justice. The null model for our analysis is thus one where the probability of concurring is a function of the distance to the median justice. Formally, we estimate:

$$\Pr(Y_i = 1 | x_i, x_{M,i}) = \Lambda(\gamma_0 + \gamma_1 |x_i - x_{M,i}|)$$

Where  $\Lambda$  denotes the cumulative distribution function of the logistic distribution. We estimate the logistic regression using maximum likelihood.<sup>9</sup> The estimates for this model

<sup>9</sup> We report asymptotic standard errors rather than the so-called "robust" ones since their use is highly questionable in all but linear models. Our findings do not change if we compute these clustered by justice or case.

with special concurrences and both special and general concurrences are in columns 2 and 4 of Table 4.

Covariates	Alternative	MJT	Alternative (Including General)	MJT (Including General)
Constant	-3.182 (0.125)	-2.664 (0.041)	-2.167 (0.084)	-1.977 (0.032)
Distance to Opinion Writer	0.137 (0.005)		0.074 (0.039)	
Regime 1	0.328 (0.136)		0.041 (0.094)	
Distance to Opinon Writer $\times$ Regime 1	0.037 (0.057)		0.063 (0.041)	
Distance To Median		0.127 (0.018)		0.107 (0.014)
N	17725	17725	17725	17725
Log-Likelihood	-4772.595	-4844.601	-7115.572	-7164.968
BIC	9584.320	9708.768	14270.274	14349.501

Table 4. Logistic regression estimates for the alternative and median justice theory (MJT) concurrence models. The second two models contain both special and general concurrences. The estimates are maximum likelihood, with asymptotic standard errors in parentheses.

Our theoretical model suggests that it is not the distance from the median justice that should be determinative, but rather the distance from the opinion writer. Furthermore, the relationship should differ based on the relative placement of the median justice. Following the logic of the model, we define two regimes for analysis to directly test Hypotheses 1 and 2. Let  $X_{o,i}$  denote the opinion writer on the particular case. The two regimes for the analysis are:

- $R_i = 1$  if the justice is between the median justice and the opinion writer or beyond the median justice away from the opinion writer. Hypothesis 1 suggests that the strength of the relationship between the distance from the justice to the opinion writer should be strongest in this regime.
- $R_i = 2$  otherwise. Hypothesis 2 suggests that the strength of the relationship between the distance from the justice to the opinion writer should be ambiguous in this regime.

This suggests an alternative model:

$$\Pr(Y_i = 1 | x_i, x_{M,i}, x_{O,i}) = \Lambda(\gamma_0 + \gamma_1|x_i - x_{O,i}| + \gamma_3 \mathbf{1}(R_i = 1) + \gamma_4 \mathbf{1}(R_i = 1)|x_i - x_{O,i}|)$$

Where  $\mathbf{1}$  is an indicator function. This is a regime switching logistic regression model, which we again fit using maximum likelihood. The theoretical model suggests that the main effect of distance to the opinion writer in Regime 1 ( $\gamma_1 + \gamma_3$ ) should be positive and significant. In Regime 2, the prediction is ambiguous, although we would expect the magnitude of the relationship to be less. Finally, we would like to compare the predictions of our alternative model to the null model. Since the models are not nested, we will use the Bayesian Information Criterion (BIC), an approximate Bayes factor, to compare the models (Raftery 1995). The model with the lower BIC is the superior model. The estimates for the alternative model are in columns 1 and 3 in Table 4.

When comparing the two models using the BIC, the alternative model is superior. *This suggests that the specification based on our formal model far better supports the observed data than the null median justice explanation.* Second, in the alternative model, as the distance between the opinion writer and the justice increases, so does the propensity to concur. The rate of change between Regime 1 and Regime 2 is essentially the same (due to the insignificant interaction). However, the significant and positive Regime 1 indicator suggests that the likelihood of concurring is significantly greater in Regime 1 than in Regime 2. Thus, but for the indistinguishable (yet positive) slopes between the two regimes, the implications of our model are borne out.

To illustrate the substantive implications of these estimates, in Figure 4 we have plotted predicted probabilities of concurring as a function of the justice's ideal point for a typical configuration of preferences. Note that the predictions are consistent with our theoretical account. In Regime 1, there is a far greater likelihood of concurrence than in Regime 2.

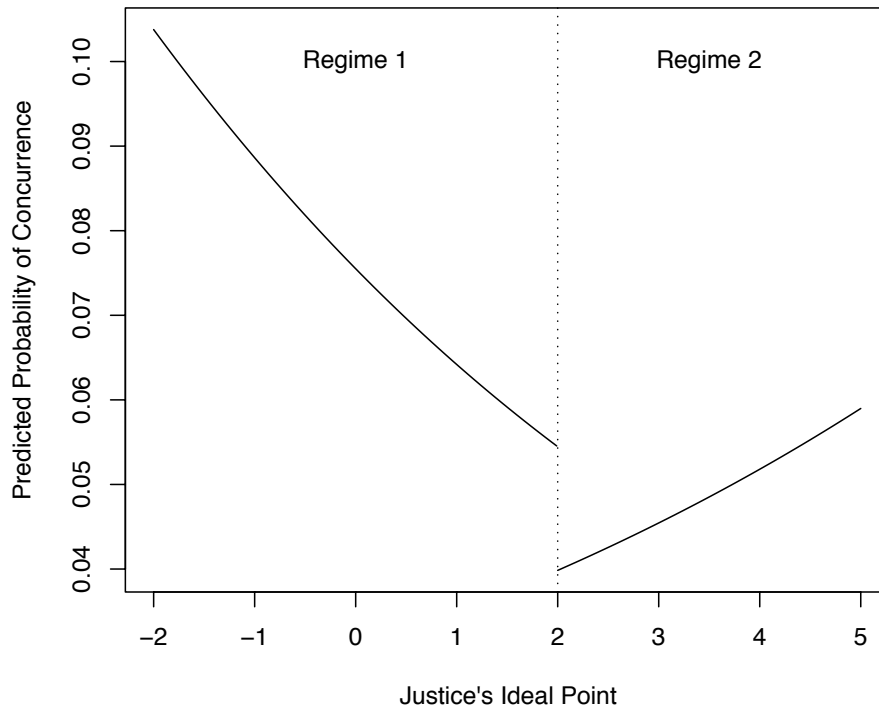


Figure 4. Predicted probabilities of filing a special concurrence as a function of the justice's ideal point. The predictions are come from the parameters estimated in the alternative model in Table 4 In this figure, the location of the opinion writer  $X_O = 2$ ; the location of the median justice is  $X_M = 0$ .

## Conclusion

We end, in a sense, where we began. In order to study judicial decision-making, it is necessary to specify where in policy space judicial decisions rest. The common assumption in the literature, that a majority opinion of the Supreme Court will rest at the median of the Court, is wrong. As we have shown, both theoretically and empirically, the two-step process of collegial judicial decision-making means that though the median justice has great power over the judgment, this is not necessarily the case for the opinion of the Court.

Where does the “law” of a Supreme Court decision rest in policy space? Here, our theory is telling, though not necessarily determinative. The answer may well turn on the size of the majority coalition. In a minimal winning coalition, theory and empirics suggest the law will rest at the median of the opinion majority. In larger coalitions, the opinion writer will have somewhat greater ability to move the law toward her ideal point. Identifying precisely where the law rests remains a question worthy of study, but we are prepared to suggest with some certainty that it is not at the Court median.

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