

# Issue Divisions and US Supreme Court Decision Making

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Majority opinions are the most important output of the US Supreme Court, not only disposing the instant case but also providing guidance for other institutions, lower courts, and litigants as to the state of the law. The authoring of dissenting opinions, though, is frequently regarded as deleterious to the Court's institutional legitimacy and the efficacy of the majority opinion. Leveraging the content of all Court opinions between 1979 and 2009, I argue dissenting justices use dissenting opinions to strategically alter the issue dimensions addressed in the majority opinion. An examination of the effect of separate opinion content on majority opinions indicates dissenting opinions yield majority opinions addressing a greater number of topics, and I provide evidence that the dynamic is driven by the strategic behavior of dissenting justices seeking to realign the Court.

In order to arrive at a majority consensus, the small group of US Supreme Court justices must bargain with one another and accommodate other views. The influences on and implications of this process have been well studied (e.g., Epstein and Knight 1998; Maltzman, Spriggs, and Wahlbeck 2000b; Murphy 1964). Justices behave strategically in order to arrive at the outcome closest to their preferred policy, subject to a variety of constraints. The product of bargaining and accommodation is an opinion of the Court that reflects an agreed upon outcome for a majority of the justices and that more broadly holds incredible value in shaping future judicial interpretations and shifting public policy. The justice who loses in this process—whose preferences are not reflected by the bargaining and accommodation—may choose to write a separate opinion, with their dissent primarily resulting from ideological disagreement on the underlying issue of a decision (Benesh and Spaeth 2007). Bargaining and accommodation, that is, occurs largely over policy preferences on a single dimension.

In this article, I challenge this framework as incomplete. I argue instead that we should expect the opinion of a dissenting justice to complicate the calculus of the majority for the instant case and even more importantly for similar subsequent litigation. For the dissenting justice, there is a strong incentive to introduce or emphasize a different issue on which

the case should be decided, a strategy well established in both political science research generally (e.g., Riker 1984, 1986, 1996) and in studies at nearly all stages of Supreme Court decision making (Black, Schutte, and Johnson 2013; Epstein and Shvetsova 2002; Wedeking 2010). The totality of this work suggests that political actors facing a loss often attempt to change the issue frame of a conflict in order to achieve a more preferable outcome. Emphasizing a different issue frame in dissent may not yield success on the merits in the instant case, but as law develops around particular case facts, the introduction of a different issue dimension may yield long-term benefits such that subsequent cases are decided more favorably from the perspective of the dissenting justice.

There are myriad examples of such framing efforts on the Court; take, for instance, Justice Stone's dissenting opinion emphasizing free speech elements in *Minersville v. Gobitis* (1940)—a case the Court decided based on religious freedom—with the Court just three years later in *West Virginia v. Barnette* (1943) arriving at a different substantive outcome in a case with nearly identical factual circumstances, basing the conclusion on Stone's free speech argument. This example and many others throughout the Court's history make evident that though strategically emphasizing issues in dissent is unlikely to lead to a different substantive outcome in an instant

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case—the justices have voted and are composing opinions—the very process of legal development incentivizes strategic issue emphasis because of the ability to structure and influence subsequent debate. As Richards and Kritzer (2002) note, justices “engage in case analysis—the process of analogical reasoning that involves parsing the issues in a case and referring to prior cases for guidance on acceptable alternatives” (305). Thus, the dissenting author’s emphasis on a different issue dimension opens the path for litigants to emphasize that dimension in subsequent litigation and to potentially realign the Court in line with the dissenter’s preferences. In all, the characteristics of legal development and the strategic behavior of dissenting justices is seen to fundamentally alter the content and structure of majority and dissenting opinions.

Using tools for computational text analysis in conjunction with decades of Supreme Court opinions, I present analyses of two dimensions of Supreme Court opinions—topic concentration and topic dissimilarity—and offer new empirical support for the strategic use of issue frames on the Supreme Court and the implications of strategic framing for the content of judicial opinions. In the first section, I demonstrate increases in the number dissenting opinions are associated with marked and statistically significant decreases in the topic concentration of majority opinions, after conditioning on the issues actually introduced to the Court. In the second section, I provide new evidence that the decrease in topic concentration in majority opinions is not a function of *ex ante* determined issue dimensions—as prior research has argued—but is instead a function of the long-term motivated strategic efforts of dissenting justices. As justices confront increasingly long odds of success on an issue dimension, they increasingly emphasize the presence of alternative dimensions on which the case could be decided.

### CRAFTING THE DISSENT

It is uncontroversial to argue that justices bargain over the outcome of a court case, with the content of the Court’s majority opinions shaped by the bargaining process (Wahlbeck, Spriggs, and Maltzman 1998). Once an opinion is assigned, the assignee drafts a majority opinion and circulates the draft to other justices. The other justices respond with their concerns or suggestions. Revisions are made, and the process repeats until a sufficient coalition of justices signs on to the majority opinion. Through this process of bargaining and accommodation, the content of the majority opinion may be influenced by each member of the majority.

Justices, though, frequently remain at odds and offer separate—regular concurring, specially concurring, and dissenting—opinions expressing these divisions (e.g., Caldeira and Zorn 1998; Hendershot et al. 2013; Walker, Epstein, and

Dixon 1988). The decision to publish a separate opinion is frequently viewed as suboptimal for the Court’s institutional legitimacy and judicial impact (e.g., Caldeira and Zorn 1998; Hendershot et al. 2013; Walker et al. 1988). Authors of concurring opinions, as members of the majority, maintain their ability to influence the content of the majority opinion and may well use the concurring opinion as a tool in their effort to do so (Wahlbeck et al. 1998, 1999).

But does the dissenting opinion author likewise influence the content of the majority opinion? According to prior work, generally not. Justices author dissenting opinions, Wahlbeck et al. (1999) argue, due to ideological and institutional motivations; the justice who is ideologically distant from the majority is more likely to issue a separate opinion. The primacy of ideology in the decision to write separately is largely based on median voter theories of the Court; increases in ideological distance from the majority coalition would thus increase dissatisfaction with the majority opinion and in turn increase the probability of a dissenting opinion. This intuition fits nicely with the foundational works on the median voter models of the Court, as those works relied on the assumption of a unidimensional policy space (e.g., Groffman and Brazill 2002; Segal 1997). More recent work developed methods to account for separate medians by issue but still relies on the assumption that each case is best represented by a single issue dimension (Lauderdale and Clark 2012; Martin, Quinn, and Epstein 2005; though see Anderson and Tahk 2007). Throughout this research, the fundamental differences between the dissenter and the majority on the issue dimension is unlikely to be resolved, with the rarity of voting fluidity (Carrubba et al. 2012; Wahlbeck et al. 1998) serving as evidence of the difficulty.

Yet the focus on preferences along a single dimension overlooks a second, perhaps more strategically important, avenue for the dissent to influence majority opinion content. Specifically, justices have choice over which issues to emphasize in their opinions and may attempt to shift the emphasis of a case to a more strategically appropriate one. Such strategic emphasis of issue frames by political actors, including Supreme Court justices, is well documented in a large body of literature. Work by Riker (1984, 1986, 1996) argued that presumed losers should seek a different, more favorable issue frame. With regards to the Supreme Court, evidence of heresthetical maneuvering has been documented in the litigant briefs (Wedeking 2010), at oral arguments (Black et al. 2013), and in conference (Epstein and Shvetsova 2002). Dissenting justices, facing a likely loss, have both short- and long-term incentives to emphasize a different issue dimension implicated by the instant case. In the short term, there is still the possibility for the justice facing “a choice between two unpalatable alternatives” to “offer hew own opinion at any time, potentially

splitting the majority coalition” (Anderson and Tahk 2007, 813). This short-term incentive for the loser to strategically emphasize a different issue is compounded by the fact that the presence of multiple issues introduces potential doctrinal paradoxes (Kornhauser and Sager 1993). Here the justices may proceed to issue-by-issue voting, where the preferences of a single justice over deliberation structures (issue by issue instead of case by case) may yield different substantive outcomes (Kornhauser and Sager 1993). In all, though rare, the dissenting justice has incentive to emphasize a different dimension in order to win the instant case.

Choosing to emphasize a different issue in a separate opinion is unique, however; by the time opinions are drafted, the die is largely (though not always) cast for the outcome of the instant case. But the utility of strategic issue emphasis in a dissenting opinion is not tied to the instant outcome; rather, emphasizing a different (and, from the dissenting justice’s perspective, a more favorable) issue dimension may yield significantly greater potential payoff as law evolves. By introducing the issue dimension in judicial opinions—language that “represents the law” (Tiller and Cross 2006)—the dissent may force the majority opinion to address some additional dimension. This reframing of a particular set of case facts as implicating alternative issues than those being addressed—and forcing the majority to address the new issue dimension in the majority opinion—allows the dissent to draw the attention of potential allies on the Court (justices) and outside the Court (litigants) to a different frame. In doing so, the dissent has set the stage for discussion in subsequent cases. The new structure potentially shapes “how justices go about deciding cases” (Richards and Kritzer 2002, 307). Attentive litigants respond to signals from the Court (Baird 2004, 2007; Rice 2014) and emphasize more favorable issue dimensions as revealed by the very actors (justices on the Court) best situated to identify strategic frames. As litigants identify and support cases that directly implicate the new issue dimension, areas of law slowly shift from one frame to another, allowing law to evolve. Justices are better positioned to distinguish new cases from any controlling precedent, a primary method for the development of the law (Gennaioli and Shleifer 2007a; Llewellyn 1960; Stone 1985). The reframing thus permits efficient legal development through distinguishing (Gennaioli and Shleifer 2007a) and avoids the volatility of directly overturning precedents (Gennaioli and Shleifer 2007b). In all, the justice crafting a dissent, by strategically emphasizing issues, establishes a structure that may guide legal development and shape the way future cases are decided.

Thus, a dissenting opinion author has clear short- and long-term utility for strategically emphasizing different issues. Likewise, the majority is incentivized to respond to these efforts.

In the first place, the majority is likely aware—from litigant briefs, conference discussions, and oral argument—of potential arguments over alternative issue dimensions on which the case could be decided. In order to head off defections, the majority may preemptively respond to the dissenting opinion by altering the content of the opinion in order to dismiss or reject the alternative dimension (e.g., Lax and Cameron 2007). Beyond the preemptive rejection, some number of dissenting opinions are the products of members of the majority who have previously threatened to write separately based on their disputes as to issue dimension; the majority is thus made aware through the bargaining process of the disputed concern. Finally, one bargaining strategy for members of the majority coalition is to wait for dissenting opinions to be circulated (Wahlbeck et al. 1998, 1999). In this circumstance, the majority must take steps to discount the argument of the dissent once the dissent has circulated or risk the defection of the waiting justice. Throughout, it is important to note this does not indicate the majority opinion must be substantially revised; rather, it only requires the majority to devote some additional attention to an issue that the majority would not otherwise have addressed. In all, there are a multitude of reasons to expect a dissenting opinion to—in some measure—shape the content of the majority opinion. But whereas prior work has generally treated this as shifting the opinion along a single issue dimension, the dissent may also shift the issues actually considered in the majority opinion.

### Testable Implications

This theory of strategic issue emphasis offers a series of testable implications that, by leveraging the content of majority and separate opinions, one can analyze to understand opinion writing, bargaining, and legal development. In particular, I argue two characteristics of the linguistic content of opinions—their topic concentration (or lack thereof) and how topically similar one opinion is to another—provide a testing ground for the empirical predictions of the strategic emphasis perspective.

First, increases in the number of dissenting opinions in a case should correlate with a decrease in the topic concentration of the majority opinion. With more efforts to introduce additional topics, the majority is more likely to be forced to adjust for reasons outlined above. Of course, one could also explain this pattern (as others have suggested in prior work) by stating that the two correlate because dissents are a function of topic concentration; that is, more dissents are likely when cases feature multiple issues on which the justices may disagree. I address this potential endogeneity problem by looking to the litigant briefs, which provide an *ex ante* measure of the issues introduced to the Court. By examining changes in

q1 the topic concentration of majority opinions relative to the topics actually introduced to the Court, I gain leverage on whether the justice's address additional issues as the strategic issue emphasis perspective suggests.<sup>1</sup>

If there is a substantive change in majority opinion content, one can then examine the justice's strategic context for evidence of strategic issue emphasis. The focus therefore turns toward understanding how topically similar two opinions are; if justices respond to their strategic environment, dissents should emphasize different issues (and therefore be more topically dissimilar) at disparate rates according to that strategic environment. Most important for the dissenting author are the characteristics of the majority coalition. Here the justice faces both short- and long-term strategic concerns. In the short term, the justice is facing a loss in the instant case. This is the classic situation for heresthetical maneuvering, and such immediate concerns are the focus of prior work on other stages of Supreme Court decision making. Thus, the dissenting justice may be more likely to author a dissimilar opinion as they grow more isolated from the majority coalition or as the size of the majority coalition grows.

However, as explained above, the opinion-writing stage is unlike other decision-making stages, with the instant outcome already largely determined. For the dissenting justice, any effort to emphasize a separate dimension in order to win the instant case has only minor strategic utility. On the other hand, utility may be derived from the long-term payoff of shifting the path of legal development. By introducing in a dissenting opinion a separate issue dimension to consider for a particular type of case, the justice opens the door for more favorable outcomes in well-framed subsequent cases presenting similar factual circumstances but emphasizing a separate issue dimension. Such a consideration would be particularly appealing to the dissenting justice when a case is being decided on an issue dimension where the majority is ideologically homogenous. There, the dissenting author faces little prospect of winning in any subsequent cases on that issue dimension; the very definition of an ideologically homogenous majority entails consistent decision making. By emphasizing a new dimension in a very public dissenting opinion, the dissenting justice may slowly shift policy closer to their preferences. Thus, the long-term strategic behavior may be observed by examining dissimilarity as a function of the ideological variance of the majority coalition.

In the remainder of this article, I move to testing these implications in turn. To do so, I use a standard form of topic

1. Because the US Supreme Court is able to select cases for review and may purposefully select cases in which the law is unclear, the viability of heresthetical maneuvering is potentially amplified here in comparison to other judicial venues

modeling to generate unsupervised measures of the content of judicial opinions. I argue that these measures (which reflect solely variation in the language used across judicial opinions) can then be used to more appropriately analyze the concentration of an opinion on a singular topic and how similar two opinions are to one another. This permits direct tests of the strategic issue framing in Supreme Court opinion writing and the constraining influence of that strategy on majority opinions.

## DATA AND RESEARCH DESIGN

Prior work has used the issue codes of the Supreme Court Database (SCD; Spaeth 2011) in order to identify differences in issue frames across opinions. In identifying issues, the SCD explicitly prioritizes classifying cases on a single issue dimension, with the single dimension selected on the basis of what appears primary to the decision of the Court. Therefore, using the SCD measure indicates that in only "approximately 1% of all votes over the Warren, Burger, and Rehnquist Courts," and in just over 5% of all instances of a justice joining or authoring a separate opinion, was there at least one issue deviation (Benesh and Spaeth 2007, 761). In other words, as a function of the coding protocol, the measure indicates differences over the issue frame are exceedingly unlikely. While the SCD codes have been widely employed in prior research, many alternatives are now available.<sup>2</sup> Of particular concern in selecting an approach is to appropriately identify multiple topics addressed by a single case, in order to identify the distributions of topics within documents (topic concentration) and the similarity of topic distributions between two documents (topic similarity). For that, standard LDA-based topic models (Blei, Ng, and Jordan 2003) provide sufficient information and have previously been used to study similar research questions (e.g., Lauderdale and Clark 2014). These models rely on the insight that the co-occurrence of terms across documents yields information on latent topics. For instance, Hall, Jurafsky, and Manning (2008) used unsupervised LDA and analyses of distributions across topic proportions in order to study "the history of ideas" across nearly 30 years of research

2. For instance, recent work by Boydston et al. (forthcoming) proposes unified methods of frame discovery across contexts of interest to political science. In particular, they build on work by Blei et al. (2003), Blei and McAuliffe (2007), and Blei, Ng, and Jordan (2003) and propose a variant of hierarchical and supervised latent Dirichlet allocation (LDA), which incorporates both hierarchical and supervised elements. While a useful step in media framing research, such an approach is not as useful for this particular research project; here the emphasis of particular issue frames could vary greatly and would not necessarily follow the nesting structure imposed by a hierarchical framework. There are few variables that would prove particularly informative for supervised models.

in computational linguistics. I therefore use LDA and fit the model using collapsed Gibbs sampling (Griffiths and Steyvers 2004; Heinrich 2008; Phan, Nguyen, and Horiguchi 2008).

I create a document-term matrix, with a row representing document  $j$  and a column representing term  $i$ . The matrix includes both majority and separate opinions. All capitalization, punctuation,<sup>3</sup> and numeric characters were removed. Only the most frequent 10,000 terms were retained.<sup>4</sup> Though unsupervised LDA has the benefit of generally imposing little structure on the corpus, it requires a priori specification of the number of topics ( $k$ ) and a priori specification of  $\alpha$ , the latter of which influences the model's tendency to characterize a document as arising from a single or many topics.<sup>5</sup> There is no agreed on standard for selecting the number of topics, though work in the area is ongoing (e.g., Wallach et al. 2009).<sup>6</sup> Therefore, I report estimates from models with a relatively small number of topics ( $k = 25$ ) and a relatively large number of topics ( $k = 100$ ), and for each set  $\alpha$  equal to  $a/k$ , per the recommendation of Griffiths and Steyvers (2004).

To gauge the validity of the estimated topics, I present the topic proportions from the 25-topic LDA against the assigned issue area from the Supreme Court Database in figure 1.<sup>7</sup> To assign topic names, I compute the most likely terms for each topic and then concatenate the three most likely terms as the topic name. The figures provide immediate evidence that the estimated topic dimensions are generally recognizable areas of concern. Take, for instance, the “employees, labor, union” LDA topic in figure 1, which falls almost entirely into the SCD issue area of Unions. Likewise, some issue areas are composed of many subtopics. Here the Criminal Procedure issue area is marked by multiple LDA topics, including topics that represent such concepts as the Fourth Amendment search and sei-

zure right, Sixth Amendment right to counsel, and the death penalty.<sup>8</sup>

Given the above demonstrates the convergent validity of the LDA topics with the SCD issue area codes, one may ask what is gained by using the unsupervised topic models.<sup>9</sup> On this, five benefits demand particular attention. First, the SCD historically has sought to assign only a topic—described as an issue—to a case, only rarely assigning a second issue. As Shapiro (2009) documents in an extensive recoding project, that preference may have important consequences for research, with a multitude of additional issues discussed in cases but not reported in the SCD. To use the SCD issues to analyze any subject involving the potential of multiple issues therefore is inappropriate at a very basic level. Second, the validity of the issue codes in the SCD has been called into question. Harvey and Woodruff (2013) found evidence that the issue code was occasionally assigned in a manner that suggested it was chosen in order to make sense of the ideological alignment of the Court; that is, multiple issues may have been present, but the assigned issue was the one that best predicted the ideological split of the Court. Third, the SCD measures are not continuous. Rather, they are explicitly coded on the basis of the topic on which the case was disposed. Such a measure might be reasonable if we believe the case is decided on a single dimension; if we believe the justices discuss and decide a multiplicity of issues, the measure surely obscures a tremendous amount of variation of interest. Fourth, and as a result of the above, any measure of topic concentration based on the SCD codes is incredibly coarse. By emphasizing the dichotomization of issues, and by giving preference to assigning a single issue to each case, any measure of topic concentration could take on only a very limited number of values, with the overwhelming majority indicating perfect topic concentration (i.e., only one topic). Fifth, and similarly to topic concentration, any measure of topical similarity is destined to be extremely coarse. The measure is virtually a dichotomy, from which we are destined to conclude separate opinions are topically similar to majority opinions.

The topic modeling approach overcomes each of these limitations. First, rather than assigning one topic, the model assigns a probabilistic assessment of the proportion of each document represented by each topic. Second, the model is

3. All punctuation was removed with the exception of intra-word hyphens, which potentially preserves informative hyphenated terms.

4. One alternative would be to use term-frequency inverse document frequency (tf-idf) scores (Blei and Lafferty 2009) to determine which words to retain, but research has begun to suggest that this preprocessing step itself begins to impose a topical structure on the document and obscures potentially important variations.

5. Note that this parameter is constant across documents. Thus, in comparing documents (as in the following analyses) the choice of the parameter should not affect inference as the case specific scores are relative only to one another. That said, comparing the measures across different implementations that use different  $\alpha$ -values could lead to serious problems.

6. This is an active area of research (see, e.g., Arun et al. 2010; Teh et al. 2006); to assuage further concerns as to the choice of topics, I also report in the appendix, available online, the results for all analyses instead using 50- and 75-topic model specifications. Results are consistent across specifications.

7. I include an identical plot for the 100-topic LDA model in the appendix.

8. These topics represent collections of co-occurring terms that best define the splits in the judicial opinions under study here and capture dimensions of ideological disagreement (e.g., Lauderdale and Clark 2014).

9. For more on the different forms of validity for consideration in measurement, see Quinn et al. (2010). Here convergent validity simply refers to the fact that the new measure demonstrates some consistency with the most widely used prior measure.

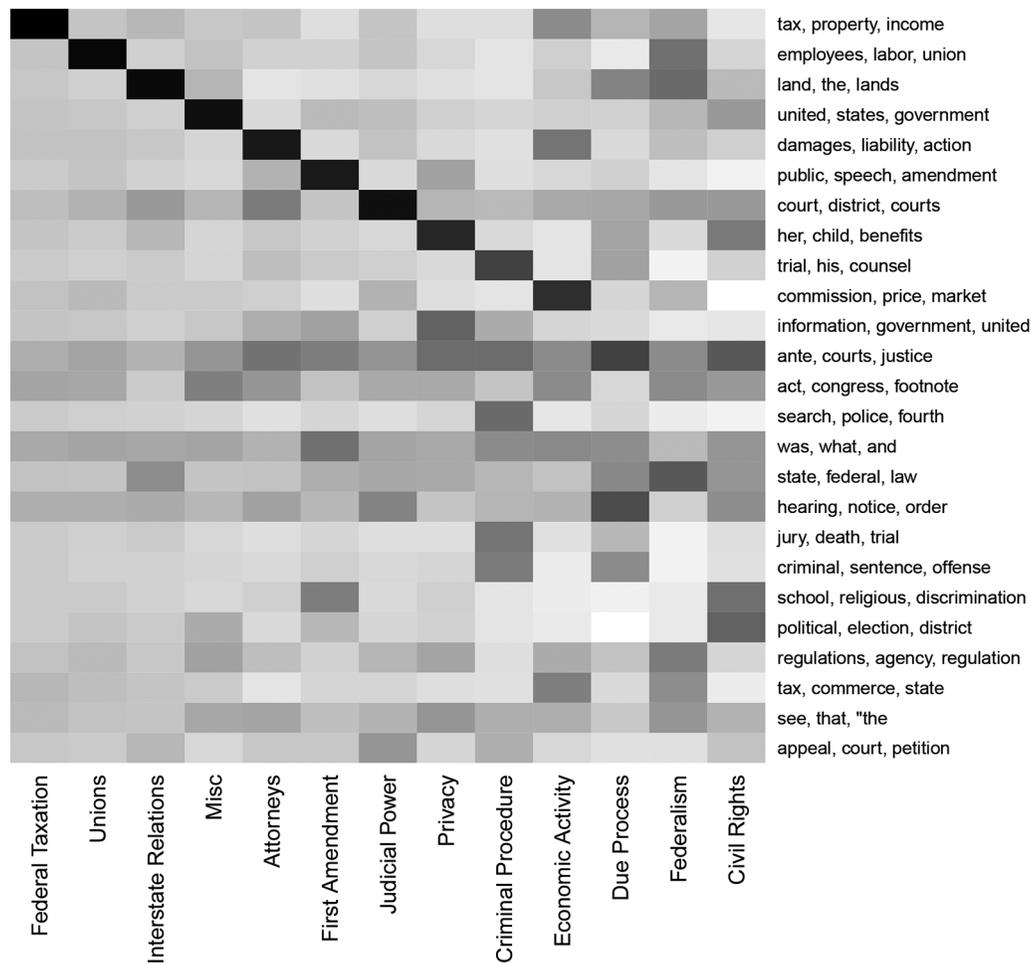


Figure 1. Heatmap of 25-topic LDA topic proportions by SCD issue codes. The heatmap is based on the average LDA topic proportion (x-axis) for each classified in the identified SCD issue areas (y-axis). Darker gray shades indicate greater values (i.e., higher average topic proportions for cases classified in that SCD issue area), while lighter gray shades indicate smaller values (i.e., lower average topic proportions for cases in that SCD issue area.)

unsupervised; while this generates concerns as to establishing the validity of individual topics (Grimmer and Stewart 2013), no confirmation bias may creep into the selection of a topic for a particular case. Given those points, it bears emphasis that these topics result not from human-assigned dichotomies of previously identified issues; rather, these topics are constructed solely from the actual words the justices use in their opinions, and the dimensions that most accurately reflect the underlying variation in that word use. Third, each topic is represented within any single document by a proportion between 0 and 1; thus, we have a continuous measure of the amount of attention devoted to each individual topic in a particular opinion. With that continuous measure of the variation in word use, estimation of measures of topic concentration and document similarity are straightforward. I move to these in turn.

### DISSENTING OPINIONS AND TOPIC CONCENTRATION

As outlined above, the dissenting justice is incentivized to introduce and emphasize new issue frames in their dissenting opinion. As Lax and Cameron (2007) argue, separate opinion authorship should necessarily influence the majority opinion as the majority opinion author seeks to head off the influence of dissents. Though unlikely for a host of reasons, vote switches do occur (Lax and Rader 2015; Maltzmann, Spriggs, and Wahlbeck 2000a; Spriggs, Maltzman, and Wahlbeck 1999). Thus, seeking to stave off defections, the majority opinion author—whether in the circulation of opinions or as a preemptive effort based on earlier discussions of the case—may respond to the introduction of the new issue by discounting the issue dimension in the majority opinion. If—as a strategic issue emphasis perspective suggests—dissenting authors em-

phasize a unique issue dimension and the majority opinion responds, the number of dissenting opinions should predict increases in the number of topics addressed by the majority, or the topic concentration of the majority opinion.

In using LDA, one output is a probabilistic assessment of the topic distribution for each document. This distribution can be thought of as similar to a host of distributions of interest through social science research; consider, for instance, market shares within an industry. One widely used method for estimating the concentration of these shares for each individual observation is to calculate a normalized Herfindahl index (Hirschman 1970). The index is estimated as:

$$C_i = \frac{\sum_{k=1}^K \hat{\pi}_i^2 - (1/K)}{1 - 1/K}, \quad (1)$$

where  $K$  is the number of topics, and  $\hat{\pi}_i$  is the proportion of a topic captured in a given document. The index takes on values between 0 and 1, with lower values indicating that the opinion is less concentrated on one topic, and higher values indicating the opinion is more concentrated on a single topic.

### Independent Variables

The data encompass all majority opinions between 1979 and 2009, and the number of dissents in a case is the primary independent variable of interest. Yet this introduces a causal concern, as prior research has split on how the number of dissents should relate to the concentration of the majority opinion. Though Benesh and Spaeth (2007) find that justices are more likely to join the majority in complex cases, others have documented that more complex cases are more likely to feature separate opinions (e.g., Wahlbeck et al. 1999). Note, however, that both hold that dissents are a function of the topic concentration of the case. I argue instead that dissents contribute to the complexity of the case by emphasizing new issue frames.

To overcome this endogeneity problem, I look to the litigant briefs. Specifically, I acquired the texts of all petitioner and respondent briefs on the merits (Sim, Routledge, and Smith 2015), which provide an *ex ante* measure of the issues actually introduced to the Court. Again estimating 25 and 100 topic LDA models, I compute the topic concentration of each brief and then estimate the mean of the petitioner and respondent Herfindahl indexes. The dependent variable in this analysis is then the average topic concentration of the petitioner and respondent briefs minus the majority opinion topic concentration; larger values of the dependent variable indicate the majority opinion addressed more issues, while smaller values indicate the majority addressed fewer issues.

Beyond the number of dissenting opinions, I also include the following covariates. Opinion majorities are not all equally strong. All else equal, increases in the number of dissenting justices may lead to less concentrated majority opinions. Moreover, the dynamic is highly correlated with the number of dissenting opinions. Thus, I control for the size of the majority by including the number of dissenting votes. Conversely, an ideologically homogenous majority may likewise be in ready agreement as to the issue of the case, leading to a more topically concentrated majority opinion. Therefore, I include a measure of the ideological variance of the majority and measure the ideology of the justices using Martin's and Quinn's (2002) scores. Moving to the opinion itself, lengthy opinions are likely to appear more concentrated on a few topics. Recall that topic concentration is a relative measure of how divided the case is across multiple topics. To the extent the majority opinion seeks to conclusively establish one particular area of law, discussing the area at great length within the opinion, the opinion would appear more concentrated. Therefore, I include the log of the word counts as a measure of opinion lengths and hypothesize that longer separate opinions are more likely to be similar to the majority opinion. Because the leadership of chief justices has been hypothesized to influence the manner in which work is completed and particularly in how quickly opinions are completed (Danelski 1960), I include fixed effects for chief justices to account for changes in content associated with the task leadership of particular chiefs. Finally, case salience has been demonstrated to matter across a variety of judicial behaviors (e.g., Brenner and Palmer 1988; Unah and Hancock 2006). Here the importance or salience of the case may influence topic concentration, as justices expand opinions when recognizing the decision is of greater visibility. While prior research has frequently employed Epstein and Segal's (2000) measure of whether or not the decision was covered on the front page of *The New York Times* the day after the decision, such an approach raises temporal causality problems. Recent advances have expanded the measure to cover multiple newspapers and across a range of time after the decision but, most critically, also before the decision (Clark, Lax, and Rice 2015). Therefore, I use the Clark et al. (2015) latent salience measure and estimate latent salience according to media coverage prior to the decision.

As the dependent variable is a continuous random variable in  $(0, 1)$ , I use beta regression. Beta regression models are appropriate for modeling rates or proportions (Ferrari and Cribari-Neto 2004) and are preferable to linear models, which can lead to predictions outside the unit interval. In order to address heterogeneity across opinion authors, the model also includes fixed effects for justice.

**Results**

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I present the results (which are consistent across specifications) in table 1. Most important for purposes of the strategic issue emphasis perspective, I find increases in topic concentration of a majority opinion (relative to the issues actually introduced) are predicted by the number of dissenting opinions. Moreover, the influence of dissenting opinions is net of the influence of dissenting votes; that is, the opinions themselves drive the observed change in the issues addressed by a majority opinion. Dissenting votes, on the other hand, are associated with negative—and, in the 100-topic model, statistically significant—decreases in the dependent variable, as dissenting votes lead to fewer issues being addressed by the majority opinion.

These results provide strong evidence suggesting the strategic importance of dissenting opinions in shaping the content of the court’s majority opinions. Increases in the number of dissenting opinions are associated with positive and statistically significant increases in the number of topics addressed by majority opinions. The substantive effect of the relationship is demonstrated in figure 2. The *y*-axis in both panels of the figure represent the range between the 25th and the 75th percentile for both the 25-topic measure of change in topic concentration (left panel) and the 100-topic measure (right panel). Moving from cases with no dissenting opinions to cases with four dissenting opinions, I observe a marked and statistically significant increase in the number of topics addressed in the majority opinion relative to the topics introduced to the court in the litigant briefs. Moreover, the pattern is nearly identical across models, indicating the results are robust to a broad range of choices for the number of topics.

In all, these findings provide strong empirical evidence for strategic issue emphasis. After taking into account both

the issues introduced to the court in the litigant briefs and differentiating dissenting opinions from dissenting votes, I find evidence dissenting opinions increase the number of topics addressed by a majority opinion. By emphasizing a different issue dimension in a dissenting opinion, a justice may introduce that frame into the present and future discussions of similar cases. Though the emphasis is unlikely to bear fruit in the instant case, subsequent litigation is potentially affected, as the new issue frame may influence the structure of debate in both subsequent litigation and decisions by the court.

**TOPICAL DISSIMILARITY OF SEPARATE OPINIONS**

Though I find evidence of the influence of dissenting opinions on majority opinions, one may still wonder whether the influence is a function of the dissenting author’s strategic behavior. I therefore move to directly testing whether the dissenting author strategically emphasizes different issues by examining the topical similarity between dissenting and majority opinions. If dissenting justices are seeking to strategically shift the frame with an eye toward legal development and shaping later decision structures, the utility of the strategy should shift in line with the dissenting justice’s strategic environment. By examining how topically similar their dissenting opinion is to the majority opinion across changes in their strategic environment, I gain leverage on whether or not justice’s are strategically emphasizing issues.

Again using the estimated topics from the unsupervised topic models, I construct a measure of the similarity of topic distributions between two documents. Because the topics are ultimately defined by the words the justices themselves choose to use, such a measure offers an untainted picture of the similarity of the language used in two documents. Specifically, the similarity between two documents *a* and *b* is estimated as:

$$S_{a,b} = \sum_{k=1}^K \left( \sqrt{\hat{\theta}_{a,k}} - \sqrt{\hat{\theta}_{b,k}} \right)^2, \tag{2}$$

where  $\hat{\theta}_{a,k}$  is the proportion of topic *k* captured in document *a* and likewise for document *b*. Because the similarity scores are based on the difference between the documents, higher scores indicate greater differences, and lower scores equal more similar opinions. I therefore refer to these scores as dissimilarity scores.

**Independent Variables**

For this analysis, the data again encompass all separate opinions authored between 1979 and 2009. The theory outlined above suggests the losing justices make an effort to shift the

Table 1. Effect of Dissenting Opinions on Topic Concentration

	25 Topics	100 Topics
Intercept	.560 (.107)	.158 (.062)
Dissenting opinions	.015* (.008)	.010* (.005)
Dissenting votes	-.005 (.004)	-.006* (.002)
Ideological variance	.002 (.005)	.001 (.003)
Word count (logged)	-.038* (.010)	-.027* (.006)
Predecision salience	.011 (.007)	-.002 (.004)
$\phi$	30.12 (.78)	81.58 (2.14)

Note. The dependent variable in these analyses is the topic concentration of the briefs minus the topic concentration of the majority opinion. Thus, larger values indicate additional topics discussed in the majority opinion (less topically concentrated), while smaller values indicate fewer topics discussed in the majority opinion. *N* = 2860.

\* *p* < .05 (one-tailed).

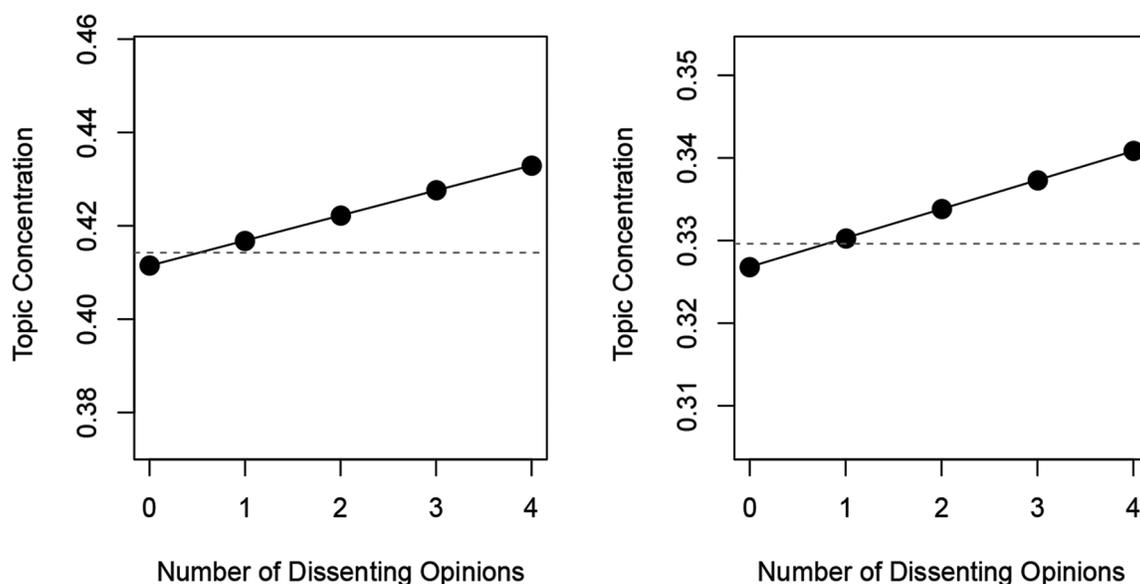


Figure 2. Predicted values of majority opinion topic concentration relative to briefs topic concentration. These plots provide predicted values of majority opinion topic concentration (y-axis) across the range of values for ideological distance (x-axis) for concentration measures computed from a 25-topic LDA (left) and a 100-topic LDA (right). The y-axis represents the range between the 25th and 75th percentile of the dependent variable. Predicted values were estimated with each of the other independent variables held at their means.

dimension on which the case is decided. The losing justice may be concerned with either or both of a short-term strategy (winning the case) and a long-term strategy (increasing probability of winning subsequent cases). In the former case, the strategic justice facing a loss in the instant case would be more likely to emphasize a new dimension as their probability of winning on the present dimension diminishes. That is, as the size of the majority increases, the utility of appealing to a different dimension would increase for the strategic justice concerned with winning the instant case. Thus, I measure the size of the majority by the number of majority votes, and expect a strategic justice to increasingly emphasize different issues (increasing topical dissimilarity between the opinions) as the majority coalition grows.

Of course, as outlined above, I expect strategic justices to be more concerned with the long-term strategy. With the decision in the instant case unlikely to shift, the justice's emphasis on a different issue dimension at the opinion writing stage should be more concerned with the long-term viability of their position on an issue dimension. In other words, how likely is the member to win subsequent cases on the present dimension? As the justice becomes increasingly unlikely to win subsequent cases on the present dimension, they should emphasize a different and more favorable dimension in dissent. To measure this, I compute the ideological variance of the majority coalition. Members of an ideologically homogenous majority are unlikely to ever be persuaded to join the dissenting justice in subsequent cases. I calculate the ideological variance of the majority coalition

using the Lauderdale and Clark (2014) scores.<sup>10</sup> Because the Clark-Lauderdale scores are based directly on how often justices vote together within an issue area, they provide an excellent avenue for exploring the strategic context of a dissenting justice.

I again control for potentially confounding variables. One may expect differences in opinion foci are a function of the justice's ideological proclivities (e.g., Benesh and Spaeth 2007). Thus, I include a measure of the ideological distance between the majority opinion median (Carrubba et al. 2012) and the separate opinion author, again using the Clark-Lauderdale scores. Conversely, longer opinions may be more similar to majority opinions, as the additional length may increase the probability of the separate opinion addressing the same topics as the typically lengthier majority opinion. Therefore, I include the log of the word counts as a measure of opinion lengths and hypothesize that longer separate opinions are more likely to be similar to the majority opinion. I also account for the *ex ante* topics introduced to the Courts by the litigants by including the measure of the average topic concentration of the briefs, with the expectation that more topically concentrated cases would be less likely to

10. Note that I am precluded from estimating the topic concentration model using the Clark-Lauderdale scores, as the publicly available scores do not include estimates of the topics for majority opinions. However, given the model there is particularly concerned with majority members shifting the content of the majority opinion, the more broad-based Martin-Quinn scores are more appropriate anyhow.

Table 2. Models of Topic Dissimilarity

	Regular	Special	Dissent
25-topic LDA			
Intercept	.994 (.221)	.771 (.178)	.558 (.074)
Distance from median	-.007 (.021)	-.023 (.021)	-.007 (.007)
Briefs topic conc.	-.303* (.175)	-.295* (.147)	-.292* (.056)
Maj. ideo. var.	-.017 (.017)	-.016 (.018)	-.013* (.006)
Majority votes	-.021 (.018)	-.017 (.016)	.005 (.006)
Word count (logged)	-.156* (.021)	-.143* (.019)	-.140* (.007)
Predecision salience	-.047* (.023)	-.003 (.019)	.038* (.008)
$\phi$	17.04 (1.40)	23.01 (1.88)	26.07 (.90)
100-topic LDA			
(Intercept)	1.860 (.284)	1.895 (.225)	1.610 (.086)
Distance from median	-.010 (.027)	-.044* (.026)	-.004 (.007)
Briefs topic conc.	-.791* (.385)	-.805* (.321)	-.679* (.112)
Maj. ideo. var.	-.028 (.022)	-.008 (.023)	-.014* (.007)
Majority votes	-.009 (.024)	-.015 (.020)	.001 (.007)
Word count (logged)	-.205* (.028)	-.210* (.023)	-.204* (.008)
Predecision salience	-.041 (.031)	.011 (.024)	.057* (.009)
$\phi$	12.77 (1.04)	17.64 (1.42)	23.01 (.78)

Note. The dependent variable in these analyses is the similarity between the separate opinion and the majority opinion. For measurement details, see text. Dissenting opinions:  $N = 1677$ . Special concurrences:  $N = 293$ . Regular concurrences:  $N = 282$ .

\*  $p < .05$  (one-tailed).

have dissimilar separate and majority opinions. Finally, I include the measure of predecision salience in order to account for potential changes associated with high salience cases. As the dependent variable is again a continuous random variable in (0,1), I utilize beta regression. I also once again address heterogeneity across opinion authors and chief justice eras by including fixed effects for opinion authors and for chief justice.

### Results

I estimate separate models for each of regular concurrences, special concurrences, and dissenting opinions for similarity scores based on a 25-topic LDA and a 100-topic LDA.<sup>11</sup> The results appear in table 2. I include both types of concurring opinions in addition to dissenting opinions as a robustness check on the observed dynamics, as the relationships should theoretically differ by opinion type. Comparing across analyses, only opinion length and the topic concentration of the briefs have a consistent influence on the similarity of the three types of separate opinions with the majority. The neg-

ative and statistically significant coefficients indicate respectively that the longer a separate opinion becomes, the more similar the topical distribution is to the majority opinion, and that the fewer topics are introduced to the Court, the more topically similar are separate opinions to the majority opinion. As for the other covariates, predecision salience yields dissenting opinions that are more dissimilar than majority opinions. Such a result comports with the underlying logic of Riker and others; the author is more willing to accept the costs of writing an opinion, and is more willing to use all available tools, including heresthetical maneuvering, to seek to realign the case when the issue is important.

But most important to this analysis are the strategic context variables, and there I find strong evidence of strategic issue emphasis in dissenting opinions in line with a justice’s long-term strategy of influencing the path of legal development. To wit, in neither dissenting opinions model does the size of the majority coalition exert a statistically significant influence on the similarity of the dissenting opinion to the majority opinion. This is relatively unsurprising; with the outcome of the case largely determined, and with justice’s unlikely in general to switch preferences on the outcome (Carrubba et al. 2012), there is little short-term utility in strategically emphasizing issues. In contrast, in both models the

11. In cases with multiple dissenting opinions, each is treated as a separate observation.

ideological variance of the majority (a measure of the long-term probability of success on that issue dimension) has a negative and statistically significant association with the topical similarity of the dissenting and majority opinions. For cases with ideologically homogenous majorities, emphasizing a different issue dimension is likely the only viable long-term strategy for achieving outcomes closer to the dissenting justice’s preferences. On the other hand, as the ideological variance of the majority coalition increases, appeals to different issue dimensions are less useful as the dissenting justice is more likely to succeed on the present dimension. Moreover, these same dynamics are not evident in either of the concurring opinions models, suggesting that the observed dynamics are not a function of measurement strategy. The substantive effect is demonstrated in figure 3, where I plot the predicted value of dissenting and majority opinion similarity (*y*-axis) across the range of values for majority coalition ideological variance. As before, the *y*-axis represents the range between the 25th and 75th percentile of the dependent variable, here opinion similarity.

These findings provide strong empirical evidence in support of the theory of strategic issue emphasis outlined above. Where a justice faces little prospect of achieving case outcomes close to their preferences, they are likely to emphasize a different issue. In doing so, they are concerned less with the

instant case and more with the process of legal development; by emphasizing a different issue and (as documented in the first analysis) forcing the majority to address that dimension, the dissent may shift the structure of subsequent debates. With litigants attentive to signals from the Court (Baird 2004, 2007; Rice 2014), the incentives of the dissenting justice play an important role in shaping the evolution of the law. This stands whether or not the Court ultimately adopts the preferences of the dissenting author; even if the Court ultimately decides subsequent cases consistently, the rejection of the alternative dimension offers an important clarification of an area of law (Gennaioli and Shleifer 2007b). Moreover, because justices are less concerned about achieving immediate outcomes at any cost and are more concerned with long-term strategy—as the latter analysis made clear—the strategic emphasis does not generate large amounts of instability; rather, justices seek to shift issue dimensions more prominently as a function of long-term outcomes.

**DISCUSSION AND CONCLUSION**

Prior research concluded US Supreme Court justices overwhelmingly agree as to the legal issue presented in a case and therefore divided almost exclusively according to their preferred outcome on that issue. As justices agreed on the issue at hand but disagreed in manners largely explicable

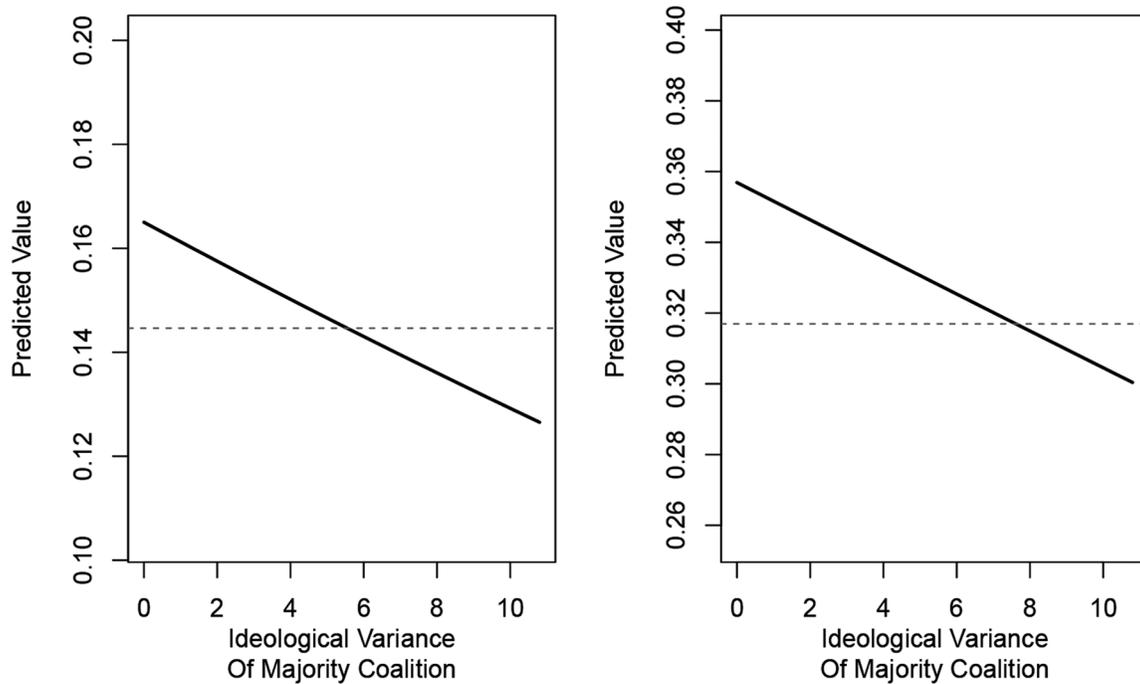


Figure 3. Predicted values of majority and dissenting opinion dissimilarity. These plots provide predicted values of the topic similarity between a dissenting opinion and the majority opinion (*y*-axis) across the range of values for ideological distance (*x*-axis) for similarity measures computed from a 25-topic LDA (left) and a 100-topic LDA (right). The *y*-axis represents the range between the 25th and 75th percentile of the dependent variable. Predicted values were estimated with each of the other independent variables held at their mean or modal values.

by measures of their ideological preferences (e.g., Benesh and Spaeth 2007; Segal and Spaeth 2002), the belief was that perhaps dissent is “particularly deleterious to the image of the Court” (Benesh and Spaeth 2007, 758). With the court increasingly divided since the breakdown in the norm of consensus, scholars and commentators have lamented the proliferation of dissenting opinions as perhaps injurious to the court.

In this article, I have presented evidence that such a conclusion is mistaken; rather, justices do disagree as to issue, as justices in dissent strategically emphasize different issue frames according to their long-term incentives. Giving preference to assigning few issues (and failing to recognize the fluidity of issue emphases) led prior work to reasonably conclude that there are few issue disagreements, and where they arose was a function of characteristics of the particular case. But by accounting for the continuous nature of the issue focus of opinions, and by directly examining the similarity of opinions, this analysis instead demonstrates strategic issue emphasis is an important component shaping the content of judicial opinions and the development of the law.

Moreover, the results are observed after accounting for the issues presented to the Court by the litigants, a consideration absent in prior work. By doing so, I provide robust evidence that dissenting opinions introduce issues into the majority opinion and do so as a function of the strategic context of the dissenting justice. This has important implications for a variety of dynamics of interest for scholars of the courts. In the first place, the changes in the majority opinion—a function of the incentive of the majority to respond to the efforts of the dissenting author—is a change in the law, as the “language of judicial opinions represents the law” (Tiller and Cross 2006). Beyond that, the dissent has provided a signal (directly from those best-situated to understand justice preferences) to litigants of a potentially useful frame for subsequent cases. Thus, prior work using only characteristics of the majority opinion in litigant signaling likely understates the level of signaling that is actually occurring. In all, by flipping the causal arrow and demonstrating the important influence of strategic issue emphasis in dissenting opinions, I have provided new evidence of the role of dissenting opinions in shaping the content of majority opinions and the development of the law.

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