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Essays on the Role of Law in Judicial Decision Making

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ESSAYS ON THE ROLE OF LAW IN JUDICIAL DECISION MAKING

by

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Introduction

Forty years ago C. Herman Prichett (1969) observed that "[P]olitical scientists who have done so much to put the 'political' in 'political jurisprudence' need to emphasize that it is still 'jurisprudence.'" In this dissertation project I seek to help correct this imbalance by providing three fresh approaches to understanding how legal factors influence the choices judges and justices make.

Essay 1 focuses on the U.S. Supreme Court's agenda setting decisions. Drawing from the archival papers of Justice Harry A. Blackmun, I analyze the extent to which considerations such as legal conflict among the circuit courts motivate justices to deviate from casting a policy-based agenda setting vote. Essay 2 focuses on the opinion writing process on the U.S. Courts of Appeals. In particular, I ask what factors lead judges on the circuit courts to cite some legally relevant previous opinions while omitting others? Finally, Essay 3, which also examines circuit court opinion writing, explores the determinants of how judges choose to positively or negatively interpret relevant previous decisions in a given issue area.

In sum, this project seeks to provide an important contribution to our substantive understanding of the U.S. Supreme Court and the circuit courts while simultaneously attempting to demonstrate that both legal and policy considerations influence judicial decision making.

Essay #1: Policy Outcomes and Jurisprudential Influence on Supreme Court Agenda Setting*

Abstract

For decades, scholars have searched for data to show that Supreme Court justices are influenced not only by policy goals but also by legal considerations. Analyzing justices' agenda-setting decisions, we show that while justices are largely motivated by policy concerns, jurisprudential considerations can prevail over their policy goals. When policy goals and legal considerations collide, policy gives way. If legal considerations and policy goals align toward the same end, law liberates justices to pursue policy. In short, we find that at the intersection of law and politics, law is both a constraint on and an opportunity for justices.

*A revised version of this essay, which was coauthored with my former classmate, Ryan J. Owens (Ph.D., Washington University, 2008), is scheduled to appear in the August 2009 issue of *Journal of Politics* (volume 71, number 3).

> [P]olitical scientists who have done so much to put the "political" in "political jurisprudence" need to emphasize that it is still "jurisprudence."
> –C. Herman Pritchett (1969, 42)

Does law influence the choices Supreme Court justices make? It has become axiomatic among judicial politics scholars that justices are motivated primarily by their policy goals. Some scholars even claim that policy alone motivates justices, leaving no room for law as an independent influence. "[There is] virtually no evidence for concluding that the justices' decisions are based on legal factors" (Segal and Spaeth 1996, 311). In part, these claims are understandable. Legal ambiguity pervades much of what the Court does, giving the appearance that law is irrelevant. That previous studies have largely been unable to detect evidence of legal influence does not, however, mean that it fails to exist. Indeed, there are strong theoretical reasons to believe that law influences the choices justices make. For example, the Court's decisions are framed by precedent and legal doctrine while lawyers' briefs are composed of the same (Gillman 2001). At private conferences, away from public consumption, justices discuss with one another how precedent governs cases (Knight and Epstein 1996). Moreover, as Baum (1997, 62) tells us, "All lawyers [and future justices] undergo law-school training that emphasizes the value of legally oriented judging." Furthermore, since the Court lacks the power to enforce its own decisions, justices must be loathe to trespass on legal norms that require adherence to certain patterns of behavior. Violating them could impugn the Court's legitimacy and provoke damaging repercussions (Mondak 1994; Epstein and Knight 1998; Lindquist and Klein 2006).

The question of whether law influences justices is not simply a narrow one of interest solely to judicial scholars. Rather, it is an issue of importance to those who study institutions and the interactions among them. If the Court as a legal institution is different from other policy-making institutions, scholars must be careful when making cross-institutional comparisons (Bailey 2007) since other bodies

operate under different norms. Relatedly, the manner in which justices pursue their policy goals in the face of legal influences can inform research on how political actors balance competing interests (Baum 1997). At stake in this analysis, then, are some of the most pressing questions in institutional scholarship.

We argue, as Pritchett did, that law is likely to matter and that it is our duty to explicate "the unique limiting conditions under which judicial policy making proceeds" (Pritchett 1969, 42). We undertake this task in the context of the Court's agenda-setting process, with results that suggest a strong role for both legal and policy considerations in this aspect of the Court's decision making. Using data collected from the personal papers of Justice Harry A. Blackmun (Epstein, Segal and Spaeth 2007), we analyze justices' agenda-setting votes in 358 randomly selected appeals or petitions for certiorari during the Court's 1986-1993 terms. We examine the predictions of a policy-based agenda-setting model and analyze how legal factors influence those predictions. We make two unique contributions. First, after empirically testing a theoretical model recently proposed by Hammond, Bonneau and Sheehan (2005), we find that justices are more likely to grant review to a case if they are ideologically closer to the predicted policy outcome on the merits than they are to the status quo and, conversely, less likely to grant review when they favor the status quo over the Court's expected policy decision on the merits. This finding builds on Caldeira, Wright and Zorn (1999), who discovered empirical evidence of forward-looking agenda-setting behavior, but did not examine the role of a status quo. Second, we find that legal considerations strongly influence justices' agenda-setting behavior. When legal and policy goals diverge, legal considerations limit justices' abilities to maximize their policy goals. When legal and policy goals converge, legal factors make it easier for justices to seek policy. In other words, law is both a constraint on and an opportunity for justices.

To explain how policy outcomes and jurisprudential considerations affect

Supreme Court agenda setting, we begin by providing a brief sketch of the Court's agenda-setting process. We then analyze justices' agenda behavior in two parts. First, we examine predictions of policy-based agenda setting. Second, we analyze how legal considerations alter those predictions. By engaging the analysis in two parts, we overcome the observational equivalence problem noted by Segal and Spaeth (2002), who argue: "The problem with systematically assessing the influence of [law] is that in many cases Supreme Court decision making would look exactly the same whether justices adhered to [the law] or not" (974).

The Decision to Grant Review

The agenda-setting process begins when a party in a lower court loses, wants the Supreme Court to review her case, and files a petition for a writ of certiorari ("cert") or an appeal with the United States Supreme Court.[1] Before the Court decides whether to grant or deny review to it, the petition must first make the "discuss list." This list is created and circulated by the Chief Justice, who initially identifies the petitions he thinks deserve formal consideration by the Court. Each associate justice can add petitions to the discuss list that they think merit the Court's attention. A petition that does not make the discuss list is summarily denied. Voting for discuss list petitions takes place at private conferences roughly once every two weeks. If four or more justices vote to hear the case, it proceeds to the merits stage, where it receives full treatment. Absent a dissent from the denial of cert, the only immediate public result reported is whether the petition is granted or denied.

A long tradition of scholarship has provided important information about the conditions under which justices vote to grant review. Perry (1991) and Provine

[1]For more details see Perry (1991) or Stern et al. (2002).

(1980) argue that agenda setting is largely a function of legal considerations, while Krol and Brenner (1990), Brenner (1997), and Ulmer (1972) argue that agenda setting can be explained by a justice's desire to reverse lower court decisions. Some of the first agenda-setting studies analyzed whether "cue theory" explained cert votes (Tanenhaus, Schick and Rosen 1963). The theory held that justices look for certain cues that signal petitions worthy of review, filtering them from frivolous petitions. Later scholars expanded on cue theory to include additional factors. Songer (1979), for example, argued that justices also use policy cues to decide which cases to review. Caldeira and Wright (1988) showed that when more groups file amicus curiae briefs either supporting or opposing review, the Court perceives the case to be more important. Since justices desire to make policy in important and far-reaching cases, they are more likely to hear cases with increased amicus participation.

Recent scholars have analyzed whether justices *strategically* pursue their policy goals when casting agenda votes. Palmer (1982), for example, finds that justices are both reverse-minded and strategic. Many of these studies, however, find that strategic agenda setting is "situational" (Baum 1997, 80). Affirm-minded justices strategically anticipate the Court's likely merits ruling (Benesh, Brenner and Spaeth 2002; Boucher and Segal 1995; Brenner 1979). These affirm-minded justices must be more strategic than reverse-minded justices, the argument goes, because they have more to lose if they miscalculate (Benesh, Brenner and Spaeth 2002). Thus, scholarship has found evidence that justices strategically engage in aggressive grants but that they do not act strategically by casting defensive denials.

Of the studies that emphasize strategic agenda setting, Caldeira, Wright and Zorn (1999) is perhaps the most sophisticated. Caldeira, Wright and Zorn (1999) argue that there should be no difference between aggressive grants and defensive denials when justices pursue their policy goals. Policy maximization simply means that justices will be more likely to vote to grant as they increasingly favor the merits

outcome and will be more likely to vote to deny as they increasingly disapprove of that policy. Their results support their theory—as the Court becomes more liberal (conservative), conservative (liberal) justices become less likely to vote to grant review. On the other hand, the more ideologically proximate a justice is with the majority, the more likely she is to grant review.

Policy-Based Agenda Setting

While the studies discussed above inform our understanding of Supreme Court agenda setting, they all have one critical limitation—they fail to model and empirically test how the status quo policy affects justices' votes.[2] In recent scholarship, Hammond, Bonneau and Sheehan (2005) provide a clear theory for how policy-seeking justices should vote at the agenda-setting stage.[3] If justices care about shaping legal policy—and we have every reason to believe that they do (Epstein and Knight 1998; Segal and Spaeth 2002; Maltzman, Spriggs and Wahlbeck 2000; Martin and Quinn 2002)—they should pay attention not just to where the Court will set policy, but how that policy will change the benefits they currently enjoy.

Indeed, there is strong anecdotal evidence to suggest that justices compare future policy to the status quo when rendering decisions. Perry's seminal text on

[2]While a few studies incorporate some sense of a status quo—such as those analyzing aggressive grants (Benesh, Brenner and Spaeth 2002; Boucher and Segal 1995; Brenner 1979)—they do not theoretically model and empirically test how, specifically, the status quo affects justices' votes. That is, they are unable to model whether a justice is ideologically closer to the status quo than to the expected merits outcome, and how that dynamic affects their decision. As such, knowledge of how the status quo location influences agenda setting remains unclear.

[3]Research in other institutional settings, such as studies on the appointment process (Nokken and Sala 2000; Hammond and Hill 1993) and studies on political control over independent agencies (Ferejohn and Shipan 1990) note the importance of the status quo.

agenda setting is replete with quotes from justices suggesting that they vote to deny review to cases where they expect the Court might negatively alter policy. For example:

> I might think the Nebraska Supreme Court made a horrible decision, but I wouldn't want to take the case, for if we take the case and affirm it, then it would become a precedent (Perry 1991, 200).

We take Hammond, Bonneau and Sheehan (2005) and Caldeira, Wright and Zorn (1999) as our departure points. We empirically test how the role of a legal status quo influences justices' agenda-setting votes. We proceed with the following model, derived from Hammond, Bonneau and Sheehan (2005). The model presents a unidimensional policy space from liberal (left) to conservative (right). J_i represents Justice i's ideal point, the point he prefers to all others. SQ is the law the Court is being asked to review and alter. θ is the expected policy that will arise if the Court hears the case on the merits. Finally, τ is the cutpoint between SQ and θ (i.e., $\tau = \frac{SQ+\theta}{2}$).

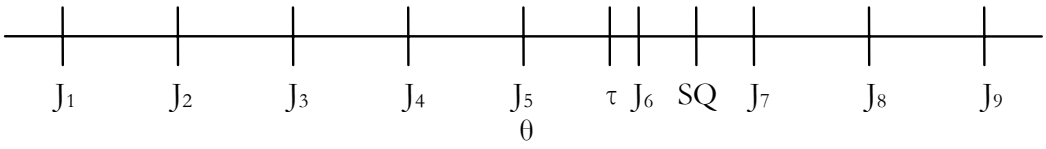

Figure 1: Spatial model of a justice's agenda setting decision. J_i = Justice$_i$'s ideal point. θ = Expected policy location of merits decision. SQ = Status quo. τ = Midpoint between SQ and θ.

Under this configuration, a purely policy-based explanation of agenda setting predicts that all $J_i < \tau$ (i.e., J_1-J_5) would vote to hear the case since the expected policy decision on the merits (θ) is better for them than is the status quo (SQ). The remaining justices, $J_i \geq \tau$ (i.e., J_6-J_9), prefer the status quo to the expected policy outcome and, as a result, would vote to deny review to the case. If, like previous efforts, we examined only justices' ideological distance from θ, the model suggests

that J_4 and J_6 would be equally likely to vote to grant review, since $|J_4-\theta| = |J_6-\theta|$. We can see, however, that a decision at θ would make J_4 better off by shifting policy closer to him but would make J_6 worse off by shifting policy away from her. Thus, J_4 should be more likely—not equally likely—to vote to hear the case than J_6. All this is to say that a policy-motivated justice's vote is a function of which outcome is closer to her—the expected policy location of the merits decision or the status quo policy. Accordingly, we expect that a policy-motivated justice will vote to grant review to a case when the ideological distance between the justice and the expected policy from the merits decision is smaller than the ideological distance between that justice and the legal status quo. When the opposite is true and the status quo is closer, the justice will vote to deny review.

Data and Methods

To test this policy-based model, we randomly sampled 358 paid non-death penalty petitions coming out of a federal court of appeals that made the Supreme Court's discuss list during the 1986-1993 terms.[4] Our dependent variable is each justice's dichotomous cert vote, which we code as 1 for grant and 0 for deny (N=3024).[5] Our source for the justice votes are the docket sheets of Justice Harry A. Blackmun, which we obtain from Epstein, Segal and Spaeth (2007).

[4]We sample petitions from the Court's discuss list because these are petitions that have a nonzero probability of being granted, since at least one justice deemed it worthy of some discussion. We examine only petitions from federal courts of appeals because there are no measures that map state supreme court justices on the same ideological scale as U.S. Supreme Court justices. We exclude capital petitions because during the time period of our study, they were treated differently than their noncapital counterparts. Capital cases were automatically added to the discuss list. Once there, it was standing policy for Justices Brennan and Marshall to vote to grant the petition, vacate the death penalty, and remand the case (Woodward and Armstrong 1979).

[5]The Appendix provides details on several coding decisions made in creating the dependent variable.

Our main independent variable of interest in this model is *Merits Outcome Closer*, which we code as 1 if the voting justice is ideologically closer to the predicted policy location of the merits decision than to the status quo policy; 0 otherwise. Coding *Merits Outcome Closer* requires an estimate of the voting justice's ideology (J_i), the predicted merits outcome (θ), and the status quo (SQ). To determine these quantities we relied on the Judicial Common Space (JCS) (Epstein et al. 2007). The JCS places Supreme Court justices (as measured by Martin and Quinn 2002) on the same ideological scale as federal circuit court judges, with scores ranging from negative (liberal) to positive (conservative).

We measure θ, the predicted policy location of the Court's merits decision, as the JCS score of the median justice of the Court for the term in question, which we obtain from Martin and Quinn (2002). Making this determination was no easy task. Scholars have offered a host of competing interpretations for where they think the Court sets policy. The model we employ here, the "Bench Median model" (Hammond, Bonneau and Sheehan 2005; Bonneau et al. 2007) reflects the median voter theorem and argues that after a free competition among the justices over draft opinions, the median's position wins out. The equilibrium result is that no matter who drafts the majority opinion, its policy reflects the preferences of the median justice. Given the theoretical appeal of the median voter theorem, as well as the recent empirical support for the Bench Median model at the merits stage (Bonneau et al. 2007), we are comfortable measuring the predicted policy of the Court's merits decision this way. Accordingly, we measure the predicted policy location of the Court's merits decision as the median justice's ideal point.[6]

[6]While Bonneau et al. (2007) found slightly stronger results for a second model that turns on the preferences of the opinion writer, such a model is unworkable at the agenda-setting stage because nearly all the justices lack *a priori* knowledge of who will assign and write the Court's opinion (Hammond, Bonneau and Sheehan 2005, 224).

Additionally, as a robustness check, we recoded the predicted policy location of

To measure the location of the status quo, we analyze the JCS scores of the judges who sat on the federal circuit panel (i.e., the lower court) that heard the case. In the typical unanimous three-judge panel decision, the status quo is the JCS score of the median judge of the majority coalition. In cases with a dissent or a special concurrence, where only two circuit judges constituted the winning coalition, we coded the status quo as the midpoint between those two judges in the majority. If the lower court decision was en banc, we coded the status quo as the median judge in the en banc majority. Finally, when district court judges sat by designation on the circuit panel, we followed Giles, Hettinger and Peppers (2001) and coded the district court judge's ideal point consistent with norms of senatorial courtesy.

To account for the fact that non-policy considerations can influence justices' votes—a concept we analyze more fully in the second part of this paper—we include a number of variables that are derived from over forty years of research on Supreme Court agenda setting (see, e.g., Tanenhaus, Schick and Rosen 1963; Ulmer, Hintz and Kirklosky 1972; Brenner 1979; Songer 1979; Caldeira and Wright 1988; Caldeira, Wright and Zorn 1999). A description of these variables, along with our expectations of their effect on the dependent variable, is available in the Appendix.

Results

Because a justice's vote to grant or deny review is dichotomous, we estimate a logistic regression model. We provide a visual depiction of the parameter estimates and their 95 percent confidence intervals in Figure 2.[7] Traditional in-sample

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the Court's merits decision using over a dozen alternative specifications. Our results remained unchanged. What is more, of all the alternative coding schemes we used to predict the Court's policy outcome, the median justice approach had the smallest value of the Bayesian Information Criteria (Long and Freese 2006). The Appendix provides a complete description of the alternative measurements we tested.

[7]The confidence intervals in the figure are calculated using asymptotic standard errors. We follow Zorn (2006) and also estimate the model with robust, justice-

diagnostics show that the model performs well. It correctly predicts roughly 75 percent of justices' votes, with a 19 percent reduction in error over guessing the modal category (that a justice votes to deny).

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clustered, and petition-clustered errors, which serve to relax the assumption of independence across observations. Some control variables fall out of significance in these models, but *Merits Outcome Closer* remains significant throughout all specifications. Tables with alternative standard errors are available in the Appendix.

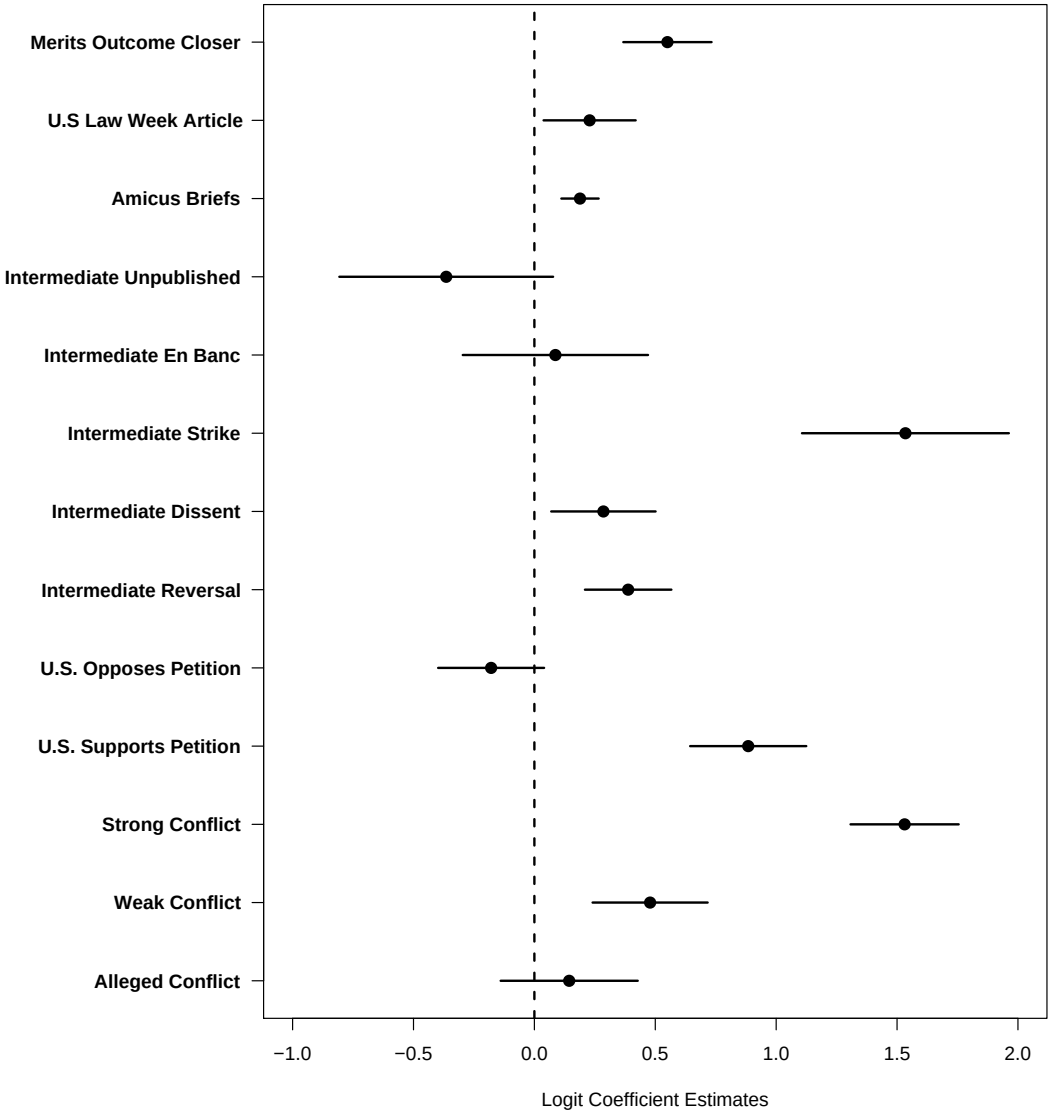

Figure 2: Parameter estimates for logistic regression of dichotomous justice agenda-setting votes (N = 3024). The solid circles are the parameter estimates and the horizontal lines represent the 95 percent confidence intervals for those estimates based on asymptotic standard errors (see note 7). The parameter estimate for the constant term, not displayed, is -2.53 [-2.82, -2.23].

Turning to *Merits Outcome Closer*, we find that justices are significantly more likely to grant review when they are ideologically closer to the predicted policy of the merits decision than when they are closer to the status quo—a result that is consistent with and expands on the findings of Caldeira, Wright and Zorn

(1999). We provide a graphical depiction of this finding in Figure 3. Holding all other variables at their median values, a justice will vote to grant review with a probability of 0.08 [0.06, 0.11] when he is closer to the status quo than to the predicted merits policy. When a justice is ideologically closer to the predicted merits outcome, however, the probability of a grant vote jumps to 0.14 [0.11, 0.17], an increase of roughly 75 percent. Relative to our other covariates, the substantive affect of *Merits Outcome Closer* is larger than the presence of weak conflict among the federal courts but smaller than the support of the U.S. in granting review.[8]

[8]If we measure *Merits Outcome Closer* as the (continuous) ideological distance between the justice and the cutpoint τ, the coefficient remains statistically significant in the expected direction.

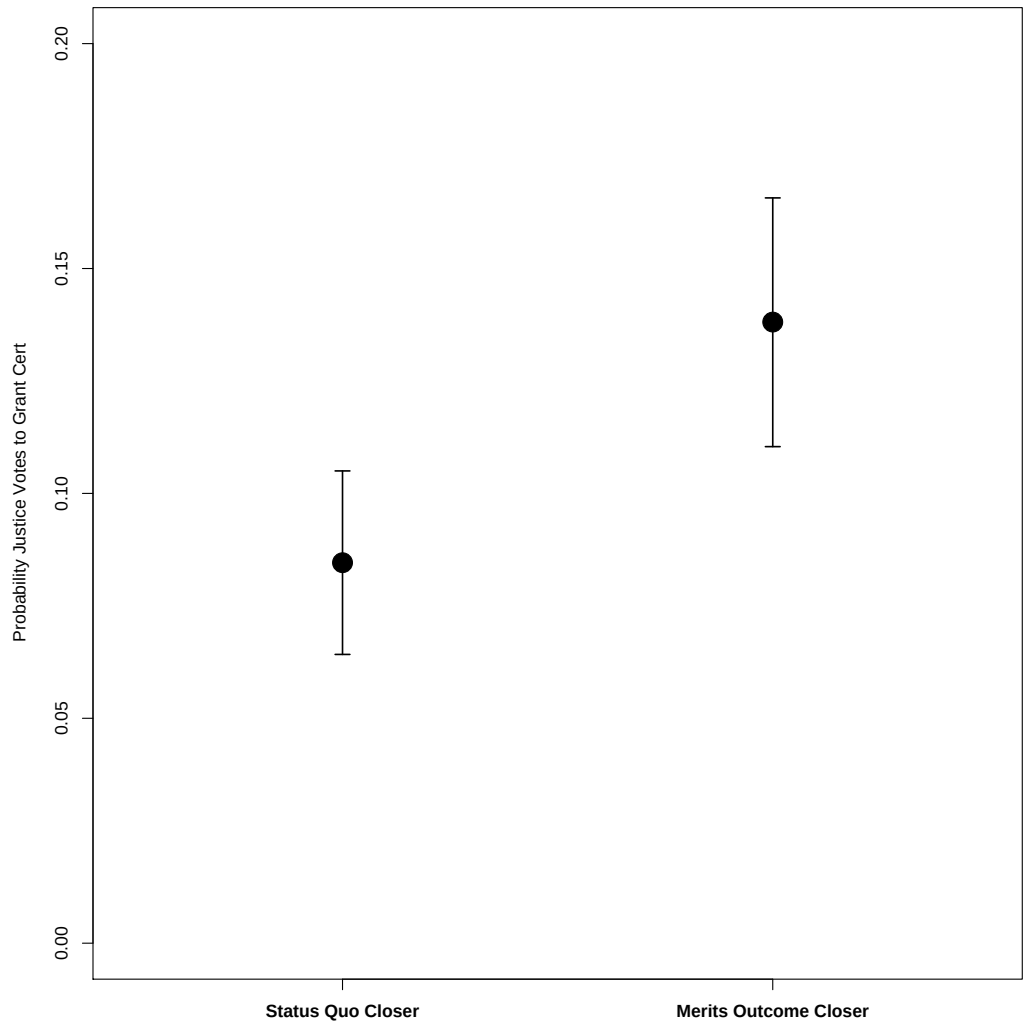

Figure 3: Predicted probability a justice votes to grant review conditional on whether he is closer to the status quo (left dot) or the predicted merits outcome (right dot). All other variables are held at their median values. The vertical lines represent the 95 percent confidence interval for the predicted value.

The significance of *Merits Outcome Closer* provides strong support for the theory that justices are policy-driven agenda setters who analyze both the Court's expected policy decision and the status quo. When they prefer the expected policy outcome of the merits decision to the status quo, justices are more likely to vote to hear a case. We contend, however, that a policy-based approach to explaining agenda setting is incomplete. That is, the predictions from our simple policy model

help explain justices' votes, but justices frequently vote contrary to such policy-based predictions. In what follows, we analyze what causes these non-policy-based votes. We suggest that legal factors lead to such votes. In that respect, we test Baum's assertion that "goals of legal accuracy and clarity might help to explain deviations from ideologically consistent voting" (Baum 1997, 71). Ultimately, we find that law can serve as a constraint on policy-seeking justices, as well as an opportunity for them.

Jurisprudential Agenda Setting

In this section, we analyze how legal factors influence justices' votes. Of course, this begs the question, why would legal factors matter? Beyond the simple answer that justices are trained in the law and taught to approach decisions legalistically, they are subject to strong legal norms (Knight and Epstein 1996). Moreover, justices rely on other institutions and actors to execute the Court's decisions. These actors are likely only to execute decisions that satisfy notions of normatively appropriate behavior—decisions that trespass such boundaries are likely to be met with non-compliance. Justices who wish to create efficacious policy must—on the whole—comply with predominant community beliefs (Lindquist and Klein 2006, 135).

Of course, law need not always be a constraint on justices. Its influence is likely to depend upon the extent to which law and policy point toward the same or different ends. On the one hand, justices may wish to pursue their policy goals but find themselves constrained by legal considerations. Legal factors may lead justices to shed their policy goals in the broader aim of protecting the legitimacy of the law and the Court (Mondak 1994). On the other hand, if a justice's policy goals accord with what legal norms countenance, the law liberates justices to pursue their

policy goals. Indeed, rather than constraining justices, the law may actually place the justice in an enhanced position to achieve policy. In short, we argue that law is likely to matter and can serve as either a constraint or a collaborator.

To that end, we turned to Perry (1991) as our theoretical starting point to determine what legal factors might influence justices' agenda votes. Perry (1991, 278) argues that a handful of legal considerations are relevant at the agenda-setting stage. Legal conflict and legal importance are the two testable features he mentions. Of course, other works also provide valuable information on the Court's agenda-setting process. Key among these is Stern et al. (2002), which argues that judicial review exercised in the lower court is an important legal factor driving the Court's agenda. We address each of these factors.

One of the Supreme Court's most important duties is to resolve legal conflict, which occurs when two or more lower courts diverge over the interpretation or application of the law. If conflict exists, the Court is expected to clarify it. Support for the importance of legal conflict can be found both in the Court's own rules (see Supreme Court Rule 10) as well as statements made by the justices, some of whom have even suggested that the presence of conflict can swamp their policy considerations.

> I would say that [cert votes] are sometimes tentative votes on the merits. Now I would say that there are certain cases that I would vote for, for example, if there was a clear split in circuits, *I would vote for cert. without even looking at the merits.* But there are other cases I would have more of a notion of what the merits were (Perry 1991, 269)(Emphasis Supplied).

Beyond its facial validity, previous scholarship buttresses our main point. As Lindquist and Klein (2006) argue, "[E]ven a cursory examination" of the Court's docket shows that policy implications alone do not explain Supreme Court agenda setting. "...justices [may] choose to hear [cases] not because they care so much about the policies involved but in order to clarify federal law ..." (139). If legal

clarity is an influential legal factor, we expect it to affect policy-seeking justices in the following way:

> *Legal Conflict Hypothesis 1:* The presence of legal conflict will increase the likelihood that a justice who prefers the status quo to the merits outcome will nevertheless vote to grant review and, therefore, cast a non-policy-based vote.

The justice's statement above in Perry's study suggests that if conflict is present, s/he would vote for cert without even looking to the merits. We can imagine, however, that policy-motivated justices take advantage of the Court's legal obligation to clarify law in order to achieve their personal policy goals. That is, policy-seeking justices might use the presence of legal conflict as "cover" to grant review to the case so that they can alter the status quo policy. Under these conditions, when policy goals and legal goals point toward the same outcome, justices are in an enhanced position to achieve policy. This gives rise to the following hypothesis:

> *Legal Conflict Hypothesis 2:* The presence of legal conflict will increase the likelihood that a justice who prefers the merits outcome to the status quo will vote to grant review.

Judicial review exercised in the intermediate court offers a second instance where legal considerations may influence justices. When a lower federal court strikes down a federal law as unconstitutional, legal norms compel the Supreme Court to grant review to the case (Stern et al. 2002, 244). Justices themselves have made this point:

> [I]f a single district judge rules that a federal statute is unconstitutional, I think we owe it to Congress to review the case and see if, in fact, the statute they've passed is unconstitutional (Perry 1991, 269).

Due to their legal goals of clarifying law and diminishing its uncertainty, justices who otherwise would have denied review on policy grounds should never-

theless be more likely to grant review to the case in order to maintain the Court's institutional legitimacy and importance as final constitutional arbiter.

Yet, much like the presence of legal conflict, some justices might take advantage of judicial review in the lower court to further their policy goals. That is, justices who prefer the predicted policy of the merits decision to the status quo should be even more likely to vote to hear the case when the lower court struck down a federal law. Thus, we suggest the following hypotheses:

> *Judicial Review Hypothesis 1:* The exercise of judicial review in the intermediate Court will increase the likelihood that a justice who prefers the status quo to the merits outcome will nevertheless vote to grant review and, therefore, cast a non-policy-based vote.

> *Judicial Review Hypothesis 2:* The exercise of judicial review in the intermediate Court will increase the likelihood that a justice who prefers the merits outcome to the status quo will vote to grant review.

Finally, Perry (1991) tells us that justices believe themselves obligated to grant review to cases that are legally important. There are some cases the resolution of which are demanded by the public. Perry's analysis consists of numerous quotes from justices who tell us that the importance of an issue or a case can force the Court to hear it:

> Sometimes the people just demand that the Supreme Court resolve an issue whether we really ought to or not. That does affect us sometimes. We just feel that the Supreme Court has to decide (Perry 1991, 259).

Important cases simply have more at stake than others. For example, the distributional consequences arising from *Grutter v. Bollinger* (2003) in which the Court upheld race-based admissions policies in higher education arguably were broader than, say, a Native American gaming dispute. In these legally important cases, then, we might expect justices to be more likely to grant review, regardless of their policy goals. Those who would deny the petition on policy grounds should instead

vote to grant review, while those who would grant review on policy grounds should become more likely to do so. Thus, we expect:

> *Legal Importance Hypothesis 1:* A petition that raises a legally important issue will increase the likelihood that a justice who prefers the status quo to the merits outcome will nevertheless vote to grant review and, therefore, cast a non-policy-based vote.

> *Legal Importance Hypothesis 2:* A petition that raises a legally important issue will increase the likelihood that a justice who prefers the merits outcome to the status quo will vote to grant review.

Of course, it could be that the law does not influence justices at all (Segal and Spaeth 2002). Rather, justices who cast deviant (i.e., non-policy based) agenda-setting votes may simply have committed voting errors. We control for this possibility in the following ways. First, we control for the possibility that the freshman effect causes non-policy based votes. Some scholars have argued that new justices face a steep learning curve during which time their calculations are imprecise and their policy preferences still unstable (Hagle 1993). During this learning period, justices may be more likely to make errors. If this is the case, freshman justices might be more likely to cast non-policy-based votes than their more senior colleagues. Second, we control for petition complexity. The likelihood of miscalculating may be higher in complex cases than in less complex ones, as the policy issues are more muddled. Third, we control for the fact that the merits outcome might be uncertain and thus cause voting errors. As the identity of the median becomes more difficult to assess, justices may be more likely to commit voting errors. Finally, we control for the distance between the status quo and the likely outcome. As the distance between these two points shrinks, it might become increasingly difficult for a policy-minded justice to distinguish between the two and, as a result, that justice may be more likely to cast a non-policy-based vote.

Data and Methods

Our dependent variable is whether a justice casts a policy-minded vote, which we define as a vote consistent with the predictions of our above spatial model. Because our hypotheses suggest that the influence of legal considerations is conditional, we delineate two types of policy-minded votes: Policy-Deny votes and Policy-Grant votes. *Policy-Deny* equals 1 where the policy model predicted that a justice would vote to Deny review and the justice in fact voted to Deny; 0 otherwise. *Policy-Grant* equals 1 where the policy model predicted that a justice would vote to Grant review and the justice in fact voted to Grant; 0 otherwise. By analyzing how the presence of these legal factors affects justices' policy votes, we can assess the independent influence of law in a way that overcomes observational equivalence.

To operationalize our legal conflict hypotheses we include two variables: *Weak Conflict* and *Strong Conflict*. Both of these variables are derived from the law clerks' discussions in pool memos. *Weak Conflict* is coded as 1 if the petitioner alleges legal conflict and the law clerk suggests that the conflict is minor and tolerable. This occurs most often when the conflict includes few circuits (i.e., is a shallow split). *Strong Conflict* is coded as 1 when the pool memo writer notes the existence of conflict that is neither minor nor tolerable.[9]

[9]Because coding the level of conflict required some judgment on the part of the coders, we conducted an intercoder reliability study for these variables. We note that all three measures are reliable by common standards. The complete results are reported in the Appendix.

An additional potential criticism of this coding technique is that the clerks might skew the intensity of the conflict in order to influence whether the Court grants review to the case. A number of factors mitigate against this concern. First, our interest is not whether conflict *in fact* exists, but whether the justices *believe* it exists. Since the pool memos are what the justices analyze when deciding whether to grant review, they serve as the best indicators of perceived conflict. As to potential claims of bias among the clerks, there are strong group norms that counsel against such behavior. What is more, clerks know that their colleagues will review and mark up the pool memo for their justices so any attempt to pad the memo is likely to be discovered and rendered ineffective (Lazarus 2005; Peppers 2006; Ward and Weiden

We tap into the judicial review hypotheses by including *Intermediate Strike*, which takes on a value of 1 if the intermediate reviewing court struck down a federal statute as unconstitutional; 0 otherwise. To operationalize our next concept, legal importance, we rely on three different measures. Our first measure comes from the intermediate court's opinion type. We code *Intermediate Unpublished* as 1 if the intermediate court's opinion was unpublished. Courts of appeals judges are allowed to dispose of easy or mundane cases through a brief opinion (usually no more than a few sentences) which they declare to be unpublished. Supreme Court Justices are hesitant to review such decisions because of their non-precedential nature. Indeed, in *Calderon v. United States* (no. 91-6685) the pool memo writer argued that the Court should not grant review to the petition because the case was not legally important, as the lower court decision was unpublished: "I recommend denial [the lower court's] decision is unpublished and therefore no 'rule' was created by the case."

Our second measure of legal importance comes from the pages of the *U.S. Law Week*, a legal periodical that seeks to "[alert] the legal profession to the most important cases and why they are important" (LexisNexis Source Information). We expect that legally important cases will generate summaries in U.S. Law Week while legally mundane cases will not. We code *U.S. Law Week Article* as 1 if there was a story written about the circuit court opinion; 0 otherwise.

Our third measure of legal importance turns on the number of amicus curiae briefs filed in a case. Participating in Supreme Court decision making is an expensive undertaking. For organized interests to involve themselves in the process, the results of the Court's decision must be important. In other words, that organized interests would bear participation costs even before the Court agrees to hear the case suggests

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2006). Moreover, our sample stretches across seven terms with numerous different memo writers. The bias threat from a single clerk or a handful of clerks is not great enough to warrant serious concern.

that the legal implications are broad and important. Thus, we suggest that as the number of groups filing amicus briefs increases, the perceived legal importance of the case should also increase.[10] Accordingly, we coded *Amicus Briefs* as the total number of amicus curiae briefs filed both in support of and in opposition to the petition.

We measured our control variables in the following way. *Freshman Justice* follows the literature standard and is a dummy variable taking on the value of 1 when the voting justice served less than two full terms when the petition received its final grant or deny vote; 0 otherwise (Maltzman, Spriggs and Wahlbeck 2000). *Procedural Complexity* is the proportion of the pool memo (in pages) that was devoted to discussing the petition's procedural history in the lower courts.[11] *Median Justice Uncertainty* is the probability—as provided by Martin and Quinn—that the justice identified as the median justice is in fact the median (Martin and Quinn

[10]Our assertion that amicus briefs can proxy for legal importance follows from Baum, who argued that the number of amicus briefs filed at the cert stage "is consistent with an interest in good policy, legal accuracy, or legal clarity: justices who give priority to any of those criteria would look for consequential cases" (Baum 1997, 78). A recent study by Collins (2008) found that amicus briefs were poor proxies for political salience. Collins used a host of correlation measures to determine that amici activity was uncorrelated with political salience at the merits stage. Rather, amici participation was tied to legal factors. We thank an anonymous reviewer for pointing out this evolving distinction to us.

[11]One potential concern with this coding scheme is that various clerks may write differently, with some clerks emphasizing unique aspects of a case's procedural background. We are unfazed by this concern. Each pool memo in the time period we studied followed the same format. It began with a Summary, moved to the Facts and Decisions Below, Petitioners' Contentions, Respondents' Contentions, a Discussion, and a Recommendation. That the clerks follow a standard procedure when writing the memo suggests that there should not be a large variance in how they personally approach the write-up of this portion of it. Moreover, for clerk bias to undermine our findings, the bias would have to be nonrandom and consistent; given the few memos written by each clerk, the potential for such bias is minimal. Nevertheless, we analyzed whether our results differed by coding the length of the discussion section as well as the length of the sections devoted to the parties' contentions. Our results remained unchanged.

2002). *Outcome-Status Quo Difference* measures the absolute value of the distance between the status quo and the expected merits outcome.

Results

Both of our dependent variables, *Policy-Deny* and *Policy-Grant*, are dichotomous, so we estimate two logistic regression models. The parameter estimates for these models are displayed graphically in Figure 4.[12] Viewed together, these results provide strong support for nearly all of our legal variables.

First, we examine the role of legal conflict, which we portray visually in Figure 5. We find that when the legal norm of conflict resolution collides with justices' policy goals, policy gives way. The probability that a justice casts a policy-based deny vote decreases from 0.89 [0.86, 0.92] in the absence of legal conflict to 0.83 [0.79, 0.88] in the presence of weak conflict. In the presence of strong legal conflict, the probability the justice casts a policy-based deny vote plummets to 0.61 [0.55, 0.67]. Simply put, justices who otherwise would have cast policy-based deny votes because they prefer the status quo to the expected outcome on the merits instead are increasingly compelled by the presence of conflict and norms of legal clarity to grant review.

[12]We also re-estimated these models with robust, justice-clustered, and petition-clustered errors and achieved nearly identical results. Full tables of standard errors are available in the Appendix.

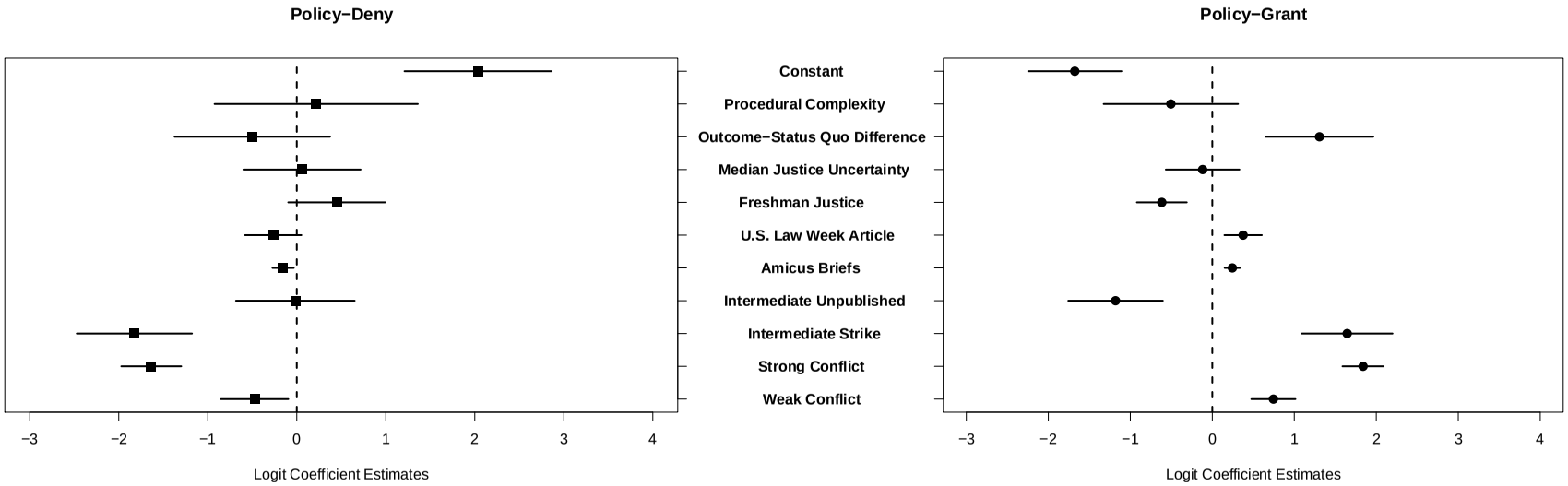

Figure 4: Parameter estimates for logistic regression of Policy-Deny votes (left panel, N = 1138) and forward Policy-Grant votes (right panel, N = 1886). The solid points are the parameter estimates and the horizontal lines represent the 95 percent confidence intervals for those estimates based on asymptotic standard errors (see note 12).

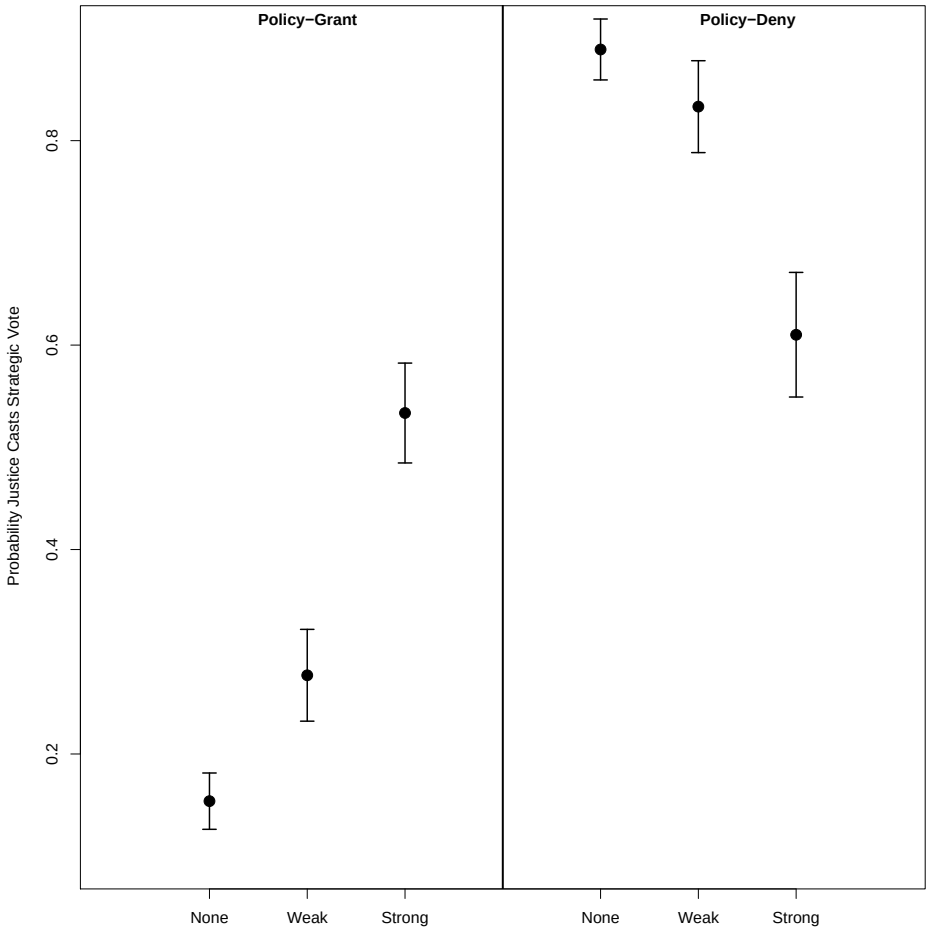

Figure 5: Predicted probabilities that a justice casts a Policy-Grant (left panel) or Policy-Deny (right panel) vote, conditional on the extent of legal conflict present in a petition. All other variables are held at their median values. The vertical lines are 95 percent confidence intervals for the predicted values.

We also find that this legal norm can serve as an opportunity for policy-motivated justices. When legal motivations and policy motivations combine toward the same end, justices can more vociferously pursue their policy goals. We hypothesized that the presence of legal conflict would increase the likelihood that a justice who prefers the merits outcome to the status quo would vote to grant review. Our findings support this claim. The probability of a policy-based grant vote more than triples from 0.17 [0.14, 0.19] to 0.56 [0.52, 0.61] when strong conflict is present.

Our *Weak Conflict* variable shows similar patterns though the magnitude of the difference is smaller.

Judicial review in the lower court also proved to be a strong legal influence. We hypothesized that justices would be more likely to vote to hear a case, regardless of their policy goals, when the Court below struck down a federal law. We did so because there are powerful norms on the Court to uphold federal legislation whenever possible. Our findings show that this dynamic strongly predicts their votes. A justice's predicted probability of casting a policy-deny vote drops from 0.89 [0.86, 0.92] to 0.56 [0.41, 0.72] when the intermediate court has struck down a federal law.

Of course, we also find—as we did with the legal conflict variables—that judicial review below can liberate justices to pursue their policy goals. We argued that justices who would vote to hear a case on policy grounds would be even more likely to grant review when the lower court struck down a federal law. The data support this argument. A justice's probability of voting to grant when he prefers the merits outcome to the status quo increases from 0.15 [0.13, 0.18] in the absence of lower court judicial review to 0.49 [0.35, 0.62] if a law was struck down by the intermediate court.

Our first legal importance variable, *Intermediate Unpublished*, performs partly as expected. Justices are less likely to cast policy-based grant votes in unpublished cases than in published ones. The predicted probability of a Policy-Grant drops from 0.15 [0.13, 0.18] in a petition with a published intermediate court decision to only 0.05 [0.02, 0.08] in a petition featuring an unpublished opinion. We do not find, however, that justices are any more or less likely to cast a Policy-Deny vote in unpublished petitions than they are in published ones.

Our second legal importance variable, *U.S. Law Week Article* performs partially as expected. We find that justices who could be expected to vote to Grant review become even more likely to do so. With no article present a justice casts

a Policy-Grant vote with a 0.15 [0.13, 0.18] probability; however, when an article is present, that probability increases to 0.21 [0.17, 0.25]. While the sign on the variable in the Policy-Deny model is in the predicted direction, its p-value is not at the conventional 95 percent level of statistical significance ($p = 0.10$).

Our third legal importance variable, *Amicus Briefs*, performs entirely as expected. Increased amici activity decreases the likelihood of casting a Policy-Deny vote. A justice has a 0.89 [0.86, 0.92] probability of casting a Policy-Deny vote with zero amicus briefs present and a 0.87 [0.84, 0.91] probability when one brief is present, a difference that, while slight, is statistically significant at the 95 percent level. In the context of policy-minded grants, justices who could be expected to Grant on policy grounds are even more likely to Grant when amicus curiae briefs are present. Moving from zero amicus briefs to one amicus brief changes the probability of a Policy-Grant from 0.15 [0.13, 0.18] to 0.19 [0.16, 0.22].

Lastly, we examine our control variables. We argued that non-policy-based votes might be the result of strategic error. Of course, that we find support for our legal hypotheses even while controlling for these additional factors endorses our legal findings. *Procedural Complexity* fails to achieve statistical significance, as does *Median Justice Uncertainty*. *Outcome-Status Quo Difference* is not statistically significant in the Policy-Deny model but it is in the Policy-Grant model. As the relative distance between the status quo and the likely merits outcome decreases and the two become less distinguishable, a justice is more likely to make a strategic error and vote to deny when the spatial model suggests he should vote to grant.[13] *Freshman Justice*, too, is statistically significant in the Policy-Grant model. Holding

[13]When the variable takes on its minimum value and the status quo and merits outcome are nearly indistinguishable, a justice casts a forward-looking grant vote with a 0.12 [0.09, 0.15] probability. When the distance is at its largest, however, making the distinction between the two points obvious, the probability more than doubles to 0.26 [0.19, 0.33].

all else equal, a freshman justice has only a 0.09 [0.06, 0.12] probability of casting a policy-based grant vote. His more senior counterpart, by contrast, who has a better grasp of his colleagues' preferences and the ideological context casts a strategic grant vote with a 0.15 [0.13, 0.18] probability—a change of over 65 percent. In the context of policy-based deny votes, however, we fail to find statistical support for a freshman effect.[14]

Discussion

We began this article with a simple but important question—does law influence the choices justices make? Our findings submit that while policy goals are quite substantial to justices, law and legal norms also influence their behavior. We are thus reminded of Perry's (1991) concluding remarks:

> [W]hen in the jurisprudential mode, the justice makes his decision based on legalistic, jurisprudential types of considerations such as whether or not there is a split in the federal circuit courts of appeal. In the outcome mode, while the justice does not ignore jurisprudential concerns, they do not dominate his decision process. Rather it is dominated by strategic considerations related to the outcome of the case on the merits.

Our empirical analysis supports precisely what Perry (1991) and Hammond, Bonneau and Sheehan (2005) theorized in their important works. Justices grant review when they believe that the policy outcome of the merits decision will be better ideologically for them than is the status quo. Conversely, they deny review when they prefer the status quo policy. Policy maximization—the outcome mode—is a strong predictor of Supreme Court agenda setting. This finding provides an

[14]We also controlled for the Chief Justice's voting behavior. Deviations in his behavior that appear to be legally driven may, in fact, be driven by his ultimate ability to control the content of the majority opinion by exercising his opinion assignment prerogative. If opinion assignment causes the deviations in policy-based voting we observe, this variable should be statistically significant. The variable fails to achieve significance.

important addition to Caldeira, Wright and Zorn (1999) and suggests the value of empirically testing theoretical models of judicial behavior (Bonneau et al. 2007).

At the same time, however, we find that legal considerations are crucial to the agenda-setting process. When certain legal factors are present, justices opt into jurisprudential mode. Those who otherwise would have denied review to the case on policy grounds instead sacrifice their policy goals, grant review, and follow the Court's legal norms. The law constrains them from acting on policy goals alone. These findings, of course, highlight the importance of legal norms on the Supreme Court, showing that the legitimacy of the Court and appropriate behavior by judicial actors is something to take seriously. Yet, the law does not only constrain. When legal considerations and policy maximization predict the same behavior, justices become freer to pursue their policy goals. That is, justices who would grant review on policy grounds become even more likely to do so, as they take shelter under cover of the law. In sum, we find that law matters, and that it is both a constraint on and an opportunity for Supreme Court justices (Hansford and Spriggs 2006).

While our results cannot speak loudly to the influence of law at later stages of the decision-making process, they whisper in our ears—why would the law influence justices during one stage of the process but not another? Indeed, in many ways the agenda-setting stage provides the most rigorous test for examining the role of law and legal norms on the Court. Justices have nearly total discretion to decide which cases the Court will hear, meaning they have freedom to pursue their raw policy goals with minimal constraints. That legal norms can thrive in such an environment is testament to their power. Moreover, the agenda-setting process is shrouded in secrecy. The fact that legal concerns are relevant at all in such a private forum suggests, of course, that law matters (Knight and Epstein 1996). Future scholarship should build on these findings to test empirically the interaction of law and policy, seeking out new ways of thinking about legal influence and policy considerations in

an effort to elucidate the Supreme Court's role among policy making institutions, and to put the "jurisprudence" back into "political jurisprudence."

Appendix

Variable Coding

Variable Name	Exp. Sign	Measurement
Merits Outcome Closer	+	Is the justice ideologically closer to the likely merits outcome than s/he is to the location of the status quo? 0 = no, 1 = yes.
U.S. Law Week Article	+	Was the intermediate court's opinion summarized in an article published by the legal periodical *U.S. Law Week*? 0 = no, 1 = yes.
Amicus Briefs	+	The number of briefs filed both supporting and opposing the granting of cert by friends of the court (amici curiae).
Intermediate En Banc	+	Was the decision of the intermediate court made en banc (i.e., generally when the full circuit hears and votes on the case)? 0 = no, 1 = yes.
Intermediate Unpublished	-	Was the opinion of the lower court published in the relevant federal or state reporter? 0 = published, 1 = unpublished.
Intermediate Strike	+	Did the intermediate court's opinion strike down as unconstitutional a federal statute? 0 = no, 1 = yes.
Intermediate Dissent	+	Did a judge in the court immediate below the Supreme Court write a dissenting opinion in the case? 0 = no, 1 = yes.
Intermediate Reversal	+	Did the court immediately below the Supreme Court reverse the decision of the court below it (usually a trial court)? 0 = no, 1 = yes.

Variable Name	**Exp. Sign**	**Measurement**
U.S. Opposes Petition	-	Is the U.S. the respondent to a petition or has it filed a brief in opposition to the granting of reviewing as amicus curiae? 0 = no, 1 = yes.
U.S. Supports Petition	+	Does U.S. ask for review either as petitioner or through participation as amicus curiae? 0 = no, 1 = yes.
Strong Conflict	+	Does clerk note conflict alleged by petitioner is real? 0 = no, 1 = yes.
Weak Conflict	+	Does clerk note conflict alleged by petitioner exists, but discounts it as shallow or otherwise not requiring the Court's immediate attention? 0 = no, 1 = yes.
Alleged Conflict	+	Does petitioner allege conflict between decision below and Supreme Court or Court of Appeals precedent? 0 = no, 1 = yes.
Freshman Justice	+	Did the voting justice serve less than two full terms when the petition received its final grant or deny vote? 0 = no, 1 = yes.
Procedural Complexity	+	The proportion of the memo (in pages) that was devoted to discussing the petition's procedural history in the lower courts.
Median Justice Uncertainty	-	The probability that the justice identified by Martin and Quinn as the median justice is in fact the median.
Outcome-Status Quo Difference	+	The absolute value of the distance between the status quo and likely merits outcome.

Table 1: Variable names and measurements.

Justice Vote Coding Notes

Our dependent variable is each justice's dichotomous vote to grant or deny review. We follow Spaeth's Expanded Burger Court Database (2001) and code votes "Join-3" votes and votes to "note probable jurisdiction" (in appeals) as votes to grant. We note, however, that if we treat Join-3 votes as missing data, our results remain the same. Relatedly, we code "dismiss" votes and votes to "dismiss for want of jurisdiction" (also in appeals) as votes to deny.

Adopting this coding scheme means we fall 198 votes short of the theoretical maximum for a nine-member body voting on 358 petitions (i.e., $358 \times 9 = 3222$). 66 of these missing values arose because fewer than nine justices sat on the Court (i.e., vacancy or non-participation) or because Justice Blackmun's docket sheets had missing entries. The remaining 132 missing values were votes to call for the views of the Solicitor General, votes to hold over the petition to a later date, or some other action that is not directly mappable onto a dichotomous framework. Rather than make arbitrary coding rules for these votes, we simply counted them as missing data. Similarly, rather than make a subjective decision about the coding of petitions where the outcome was to grant, vacate, and remand, we opted to exclude them from our analysis.

Alternative Measurement of Likely Merits Outcome (θ)

As noted in the text, there are several plausible ways to operationalize the likely merits outcome. We select the median justice's ideal point for its theoretical appeal (median voter theorem), empirical support in the recent literature (Bonneau et al. 2007), and because it performs best among a wide pool of alternatives considered while performing our data analysis.

We tested a variety of alternatives to measure the predicted policy outcome (θ). Following the approach of Caldeira, Wright and Zorn (1999), we created a rolling

issue-specific variable. To code this variable we first examined all cases decided in a particular Spaeth *value* area for the previous t terms, where t ranged anywhere from 1 to 7. For each set of cases in a value area, we extracted the JCS score of the median member of the majority coalition. From this vector of JCS scores we then took the median value, which produced our estimate of the policy outcome for a given value area in a given term.

In addition to this approach we also tested a variable where the number of cases that a justice would use to estimate the likely policy outcome was constant across issue areas. For example, we sorted all decisions in criminal procedure by the term of decision and extracted the JCS score of the median coalition member for the n most recent cases, where n ranged from 1 to 25. From this vector of JCS scores we again took the median value to obtain our estimate.

We also replicated both the rolling issue variable approach and the fixed number of cases approach but instead of extracting the JCS score of the median of the majority coalition, we used the JCS score of the majority opinion writer. Again, across these multiple specifications (nearly three dozen in total) our result for the *Merits Outcome Closer* variable remain unchanged.

Intercoder Reliability of Conflict Variables

To assess the reliability of our coding of *Alleged Conflict*, *Weak Conflict*, and *Strong Conflict*, we took a sample of 45 petitions from our dataset and one author who had not initially coded the petitions went back and coded for these variables. The results from the reliability analysis are reported below. Note that * denotes $p < 0.001$. By the standard metric used to interpret the Kappa statistic, the agreement values for *Alleged Conflict* and *Weak Conflict* are "substantial" while the value for *Strong Conflict* is "almost perfect." This metric comes from Landis and Koch (1977, 165).

Variable	Agreement %	Expected Agreement %	Kappa Value
Alleged Conflict	86.7	63.1	0.639*
Weak Conflict	86.7	63.0	0.640*
Strong Conflict	93.3	64.2	0.814*

Table 2: Intercoder reliability results for assessment of lower court conflict for the certiorari pool memoranda.

Standard Error Specification for Figure 2

	Standard Error Type			
Variable	*Asymptotic*	*Robust*	*Justice*	*Petition*
Alleged Conflict	0.145	0.144	0.206	0.229
Weak Conflict	0.121*	0.122*	0.149*	0.187*
Strong Conflict	0.114*	0.114*	0.184*	0.190*
U.S. Supports Petition	0.123*	0.122*	0.113*	0.226*
U.S. Opposes Petition	0.112	0.113	0.136	0.200
Intermediate Reversal	0.091*	0.091*	0.110*	0.160*
Intermediate Dissent	0.110*	0.110*	0.126*	0.196
Intermediate Strike	0.218*	0.215*	0.214*	0.407*
En Banc Review	0.195	0.195	0.148	0.376
Unpublished Opinion	0.226	0.234	0.271	0.409
Amicus Briefs	0.039*	0.043*	0.057*	0.079*
U.S. Law Week Article	0.097*	0.095*	0.062*	0.172
Outcome Closer	0.093*	0.094*	0.171*	0.099*
Constant	0.152*	0.149*	0.223*	0.226*

Table 3: Alternative standard error estimates for logistic regression model of dichotomous justice agenda-setting votes. * denotes $p < 0.05$ (two-tailed test). N = 3024 for all models. See figure in article for coefficient estimates.

Standard Error Specification for Figure 4

Policy-Grant Model

	Standard Error Type			
Variable	*Asymptotic*	*Robust*	*Justice*	*Petition*
Weak Conflict	0.138*	0.140*	0.185*	0.217*
Strong Conflict	0.128*	0.128*	0.212*	0.210*
Intermediate Strike	0.282*	0.272*	0.280*	0.444*
Unpublished Opinion	0.294*	0.294*	0.199*	0.475*
Amicus Briefs	0.048*	0.054*	0.069*	0.088*
U.S. Law Week Article	0.117*	0.116*	0.084*	0.190*
Freshman Justice	0.156*	0.150*	0.245*	0.125*
Merits Outcome Uncertainty	0.229	0.230	0.368	0.371
Outcome-Status Quo Difference	0.335*	0.327*	0.287*	0.523*
Procedural Complexity	0.418	0.420	0.453	0.690
Constant	0.290*	0.288*	0.455*	0.481*

Table 4: Alternative standard error estimates for logistic regression model of Policy-Grant votes. * denotes $p < 0.05$ (two-tailed test). N = 1886 for all models. See figure in article for coefficient estimates.

Policy-Deny Model

	Standard Error Type			
Variable	*Asymptotic*	*Robust*	*Justice*	*Petition*
Weak Conflict	0.193*	0.191*	0.137*	0.245
Strong Conflict	0.172*	0.171*	0.139*	0.219*
Intermediate Strike	0.330*	0.341*	0.211*	0.488*
Unpublished Opinion	0.340	0.342	0.415	0.413
Amicus Briefs	0.061*	0.060*	0.060*	0.087
U.S. Law Week Article	0.162	0.163	0.194	0.224
Freshman Justice	0.278	0.257	0.150*	0.246
Merits Outcome Uncertainty	0.336	0.316	0.197	0.408
Outcome-Status Quo Difference	0.446	0.442	0.216*	0.579
Procedural Complexity	0.583	0.591	0.440	0.754
Constant	0.422*	0.413*	0.201*	0.534*

Table 5: Alternative standard error estimates for logistic regression model of Policy-Deny votes. * denotes $p < 0.05$ (two-tailed test). N = 1138 for all models. See figure in article for coefficient estimates.

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The Joint Effect of Law and Policy on U.S. Courts of Appeals' Citation Practices

Abstract

This paper argues that citation practices by judges on the U.S. Courts of Appeals are driven by the interplay between policy and legal considerations. Circuit judges are more likely to cite previous opinions that agree with their desired policy outcome, but this tendency can be dampened by legal considerations such as whether a previous decision is regarded as being good law. Accordingly, this paper provides some of the first evidence that circuit judges, much like their counterparts on the U.S. Supreme Court, behave in a sophisticated manner. Beyond this, the study also provides evidence to suggest that, at least in the circuit court context, using citations as valid indicators of other concepts such as compliance or legal development might yield biased results.

Why do judges—and the court opinions they write—cite some previously decided cases but not others? Do judges cherry pick previous opinions that support their intended position? Does a judge intentionally avoid opinions written by ideological opponents or, alternatively, embrace them in order to enhance their opinion's credibility? Stated in other terms, when presented with a population of legally-relevant cases, what factors motivate a judge to highlight some while simultaneously discarding others?

Answering these questions is important for a variety of reasons. As others have noted, for all too long now, studies of courts and judges have fixated on both case dispositions (i.e., reverse or affirm) or ideological outcomes (i.e., conservative or liberal). Though important—and highly visible—components of the work done by courts, they are ultimately not the primary mechanism by which judges set lasting legal policy. Indeed, as Friedman notes: "In common law systems, law is found primarily in legal opinions, not divined from the outcomes of cases [...] In judicial opinions are found the rules that govern the next case, and thus the conduct of institutions and actors in society" (2006, 266).

One significant component of judicial opinions is their tendency to ground the legal arguments made therein in existing legal authority and, more specifically, the previous decisions of other courts (Merryman 1954; Landes and Posner 1976; Friedman et al. 1981; Walsh 1997; Spriggs and Hansford 2002; Choi and Gulati 2004). That judges cite previous opinions in justifying the outcomes they reach is commonly accepted by scholars. Answers to closely related questions, however, are not.

Are citations ultimately window dressing haphazardly selected by attitudinally-minded judges? Segal and Spaeth, for example, approvingly quote from an interview of Judge Richard Posner, who suggests the usage of precedent and history is an "extremely phony" effort by judges to assuage concerns about their opinions being

based "on their personal views" (Greenhouse 1999 qtd. in Segal and Spaeth 2002, 85). Or, by contrast, do they reflect a judge's desire to pursue legal policy within limits imposed by legal considerations (Hansford and Spriggs 2006)?

In this paper I seek to address these questions in the context of the U.S. Courts of Appeals.[1] In what follows, I argue that as sophisticated seekers of legal policy, circuit court judges are no different than their colleagues on the Supreme Court in that they use all tools at their disposal—including citations—to help etch their policy preferences into law. Consistent with this, I find that judges are more likely to cite previous opinions whose outcomes agree with their own preferences in a case. They pursue these preferences within constraints, however. In the context of opinion citations, legal considerations such as the authoritativeness of a previous opinion exert influence over the likelihood that a judge will cite that opinion. In particular, when a previous opinion is considered "bad law," this leads a judge to avoid citing that previous opinion, *even when it supports her desired outcome in a case.*

Beyond the substantive and theoretical importance of these results, they also have important implications for scholarly use of citations to study other aspects of judicial behavior. To the extent that citation (and non-citation) practices are not random, studies that use only observed citations while neglecting to control for cases that *could* have been cited (but were not) run the risk of introducing selection bias into their analysis. As citations are frequently used to measure a variety of quantities (e.g., Klein and Morrisroe 1999; Westerland et al. 2006), the potential impact of this finding is large.

The remainder of the paper proceeds in four sections. I first develop a series of hypotheses about the interplay between policy and legal considerations. Next, I turn

[1]Throughout this paper I use the terms "courts of appeals," "circuit courts," and "intermediate courts" interchangeably. All refer back to the same set of courts.

to describing my research design and data, how they compare to previous efforts, and why my approach overcomes critical limitations of earlier studies. Third, I discuss the data used to operationalize my hypotheses, which I then test and interpret using a statistical model. Finally, I conclude with a discussion of the broader impact of the findings I obtain.

Theory and Hypotheses

My theoretical starting point is a very common one: judges are strategic crafters of legal policy. Judges are interested in crafting legal policy that mirrors their own preferences but must pursue this goal in the face of numerous constraints (Epstein and Knight 1998). Application of this basic premise gives way to expectations about how judges—most often justices on the Supreme Court—will behave in a variety of contexts including agenda setting, oral arguments, opinion bargaining, and the final merits vote. While a large—and growing—body of evidence supports the notion that Supreme Court justices behave strategically (Caldeira, Wright and Zorn 1999; Johnson 2004; Maltzman, Spriggs and Wahlbeck 2000), the verdict on circuit court judges is decidedly mixed. Though circuit judges do not write dissents for strategic reasons (Hettinger, Lindquist and Martinek 2004, 2006), they do anticipate the preferences of other panel members when voting on case dispositions (Lindquist, Martinek and Hettinger 2007).[2] Here, I focus on developing theoretically-informed expectations about the decision to cite relevant cases decided by other circuit courts.

Why, then, would a policy-minded judge in the "instant case" before a circuit

[2]Though the consistency of the statistical results with my hypotheses will ultimately provide the most robust answer to judicial behavior, I take solace in the fact that the words of judges themselves provide facial support for the strategic perspective. Said one anonymous circuit judge to Klein, "the art of judging consists in trying to produce just results within the constraints of legality" (2002, 24).

decide to cite the previous decision of a peer court on a similar topic?[3] To ensure the decision is regarded as legitimate, judges anchor their decisions in legal authority (e.g., Merryman 1954; Landes and Posner 1976; Friedman et al. 1981; Walsh 1997; Spriggs and Hansford 2002; Choi and Gulati 2004). While this is a constraint on judges, to the extent a wide range of legal authorities exist, it is an opportunity as well. Since the opinion in the instant case before the panel will create legal policy for the circuit, a judge should be more likely to reference a previous decision when the decision suggests an outcome that is similar to what the deciding judge believes should be legal policy (Merryman 1954; Songer 1988; Spriggs and Hansford 2002; Hansford and Spriggs 2006). I refer to this as the *Opinion Outcome Hypothesis*.

Beyond the simple disposition of a case, however, the legal reasoning contained within it will matter, as well. While two cases both might reach the same substantive outcome, they could take markedly different paths to reach it. As this reasoning is ultimately more important than the case's disposition (Friedman 2006), a judge in the instant case should seek previous legal reasoning that is also congruent with her own preferences. Accordingly, in forming my *Opinion Basis Hypothesis*, I suggest that a judge in an instant case will be more likely to cite a previous case when the reasoning in the previous opinion is consistent with her preferences.

As these two forces should complement each other in the sense that a policy-minded judge would most prefer to cite previous opinions with both consistent outcomes and bases, there should be an interactive relationship between an opinion's

[3]Rather than use a variety of strained creative prose to differentiate among old decisions and the current ones, I adopt the following usage scheme: "Instant case" refers to the case being decide in the present. Logically, then, "Previous case(s)" corresponds to all of the decisions that came before the instant case that were legally relevant.

I intentionally avoid the word "precedent" in this context as there is no horizontal form of stare decisis. That is, while the circuit and district courts are obliged to follow the Supreme Court's decisions, they need not follow the decisions of courts on the same "level" in the judicial hierarchy (Cross 2007).

outcome and basis. When both the outcome and basis of a previous opinion align (are discordant) with an instant judge's preferences, the instant judge should be more (less) likely to cite it.[4] This is the *Outcome-Basis Interactive Hypothesis*.

Policy considerations alone, however, cannot be a complete explanation of judicial decision making. Simply put, jurisprudential considerations matter, as well (Perry 1991; Howard and Segal 2002; Songer, Ginn and Sarver 2003; Black and Owens 2009). As noted above, judges root their decisions in previous legal authority. While I suggest judges have significant latitude in the cases they select to cite, there are constraints, as well. One important consideration is the extent to which a previous decision is regarded as being good law. In other words, not all legal authorities are equally authoritative or, to borrow the language of Hansford and Spriggs (2006), "legally vital." Citing a previous opinion that is policy congruent but authoritatively weak might ultimately work against a judge's desired goals. Accordingly, my *Legal Vitality Hypothesis* suggests that as the authoritativeness of a previous decision increases (decreases), an instant case will be more (less) likely to cite it.

The pursuit of legal and policy goals is not necessarily mutually exclusive. In particular, when legal factors align with a judge's policy goals, it provides an even greater opportunity for a judge to pursue his or her policy preferences (Hansford and Spriggs 2006). As a result, when positive vitality is coupled with policy congruence (in terms both of outcome and basis) in a previous opinion, I expect that a judge will be more likely to cite it. Conversely, when negative vitality is paired with a

[4]If one reduces outcome and basis to dichotomies, you obtain four combinations: (1) Outcome agrees, basis agrees, (2) Outcome agrees, basis disagrees, (3) Outcome disagrees, basis agrees, and (4) Outcome disagrees, basis disagrees. My theory suggests that, as ordinal matter, (1) is most preferred and (4) is least preferred. I have complete agnosticism, however, with regards to whether a judge would rather have (2)—i.e., an outcome that she agrees with but a basis that she does not—as opposed to (3)—i.e., a basis that she agrees with but an outcome the she does not.

lack of policy support in a previous opinion, an instant opinion will be less likely to cite it.[5] This is my *Policy-Vitality Interaction Hypothesis*.

Identifying and Capturing Non-Citation

The single greatest problem in analyzing citation usage is defining the population of previous opinions that *could* be cited. While it is easy to observe and record the previous cases that are cited in an instant opinion (i.e., the 1's), what the researcher does not know is what cases could have been cited that were not (i.e., the 0's). To get around this issue, earlier research has turned to one of two strategies. The first approach is to change the unit of analysis. Instead of analyzing whether an *individual* instant opinion cites an *individual* previous opinion, researchers aggregate citation data to the opinion (Solberg, Emrey and Haire 2006), judge (Choi and Gulati 2008), or court level (Caldeira 1985). A surrogate for the set of possible cases is then measured at that level, as well. These surrogates are often—and necessarily—coarsely measured.

In a recent study, for example, Choi and Gulati (2008) examine citations at the level of the circuit court judge by tabulating the proportion of opinions cited by a judge that were authored by a judge appointed by a president of the opposite party. To control for available opinions, the authors control simply for the total number of opinions written by judges appointed by an opposite-party president. Though likely better than nothing, this approach makes the tenuous assumption that *all* previous opinions authored by a Republican-appointed judge will be relevant in any

[5]The same type of agnosticism described in footnote 4 remains here, as well. A judge will most prefer to cite a policy congruent and legally vital previous opinion and least prefer to cite one that is authoritatively weak and incongruent with regards to policy; my theory is indifferent with regards to whether policy alone is stronger the vitality alone and I leave it to the data to specify which is more forceful.

particular instant decision.[6]

A second approach, used only in the context of the Supreme Court, has been to define a broad set of potentially relevant cases and proceed in conducting the analysis at an aggregated unit of analysis. Analyzing the Court's decision to interpret its own precedent, Hansford and Spriggs (2006) suggest that the pool of interpretable cases consists of all opinions that had been decided prior to the instant case. Their dependent variable is whether, in a given year, the Court interpreted a particular previous decision.[7] As the number of available circuit court decisions dwarfs that of the Supreme Court, such an approach is not practically feasible in the study at hand.[8]

As citations are fundamentally a linkage between two cases, the proper unit

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[6]Alternatively, the approach assumes that there are no systematic difference in the proportion of applicable previous decisions authored by Republican versus Democrat-appointed judges. This assumption, too, is not likely to be true.

[7]The duo make a similar argument in a related study about the Court's decision to overrule its own precedent, where, in a given year, all previously decided cases are "at risk" of being overturned (Spriggs and Hansford 2001).

In previous work on the interpretation and incorporation of precedent, Spriggs and Hansford (2002) restrict the pool of relevant cases to only those cited in the litigant or amicus curiae briefs and conduct their analysis at the individual citation level. They find that this approach omits roughly 10 percent of the precedents the Court goes on to interpret, which explains the difference between the two studies. Using briefs to study the circuit courts is not logistically feasible; unlike Supreme Court briefs, the microfiche of which are available in a large number of libraries, no serialized version of courts of appeals briefs exists. Coverage on electronic databases such as Westlaw or LexisNexis is both inconsistent and incomplete.

[8]This is not to say that it would not be beneficial. Indeed, one advantage of the inclusive approach invoked by Hansford and Spriggs is that it can potentially capture instances where judges might reason by analogy *across* issue areas, which is an interesting substantive and theoretical quantity of interest. Capturing is not the same as quantifying, however, and one would need an additional variable (or variables) to explicate the circumstances under which judges take such a tack. In the context of this analysis, I note that such cross-issue references are presumably most likely to occur in the rule-creating opinion (as there are no previous opinions on point). As a result, because I analyze the *subsequent* opinions, my inability to capture cross-issue analogical reasoning does not unduly undermine my results.

of analysis is the citation itself. Thus, the aggregate approaches described above are inappropriate for the present analysis.[9] In lieu of this approach, I capitalize on a novel strategy employed by Klein (2002) in his study of rule adoption on the circuit courts. For his study, Klein canvassed the areas of criminal, environmental, and patent law to identify a total of 81 legal rules upon which multiple circuit courts rendered judgement.[10] These rules were initially adopted between 1981 and 1991 and then subsequently addressed by other circuit courts in a total of 300 decisions that came between the rule's initial adoption and 1995. Critically, each of these legal rules represented an area of law in which the Supreme Court had not yet ruled. That is, these were, as far as the circuit courts were concerned, new legal questions or issues of first impression. As a result, a convenient benefit to these data is that they allow for the analysis of circuit court judge behavior when there is no vertical constraint imposed by existing Supreme Court precedent.[11]

Figure 1 and Figure 2 provide a graphical portrayal of how this process occurs and how I subsequently adapt it for conducting my empirical analysis. In

[9]Beyond the substantive concerns and measurement error described above, there are broader concerns about the ecological nature of this approach. In particular, such an approach will likely produce an aggregation bias that can account for some portion of the observed difference between the groups being studied.

[10]The subject matter breakdown for the number of rules is as follows: search and seizure law, 27; environmental law, 31; antitrust law, 23. In justifying these particular areas, Klein notes they are broadly representaive of the case work done by circuit courts and have widespread impact (2002, 40). To identify the rule-creating opinions, Klein examined casebooks, law review articles, and other research supplements (e.g., *American Law Reports* and *West's Federal Digest*). Progeny cases were identified using keyword searches and citation indices (Klein 2002, 42).

[11]Of course, it could be the case that circuit court judges attempt to anticipate how the Supreme Court might rule if it were to address a particular legal question. In his analysis of these exact cases, however, Klein (2002) fails to find evidence of such behavior. Interview evidence from circuit court judges (Bowie and Songer 2009) and nearly all existing empirical evidence supports the conclusion that circuit judges do not strategically anticipate the preferences of the Supreme Court (Cross and Tiller 1998; Klein and Hume 2003; Cross 2007; but see Songer, Segal, and Cameron 1994).

particular, Figure 1 suggests that the Ninth Circuit initially ruled on an issue of first impression in 1985. In the six years that followed, four additional circuits considered the same legal question. This string of four progeny cases yields a total of eleven usable observations, which are reported in Figure 2, where each one of the potential linkages has been coded for citation of a previous opinion by an instant opinion. Using the case list presented in Klein (147-167 2002), the legal rules and progeny cases ultimately yielded a total of 1048 potential linkages.

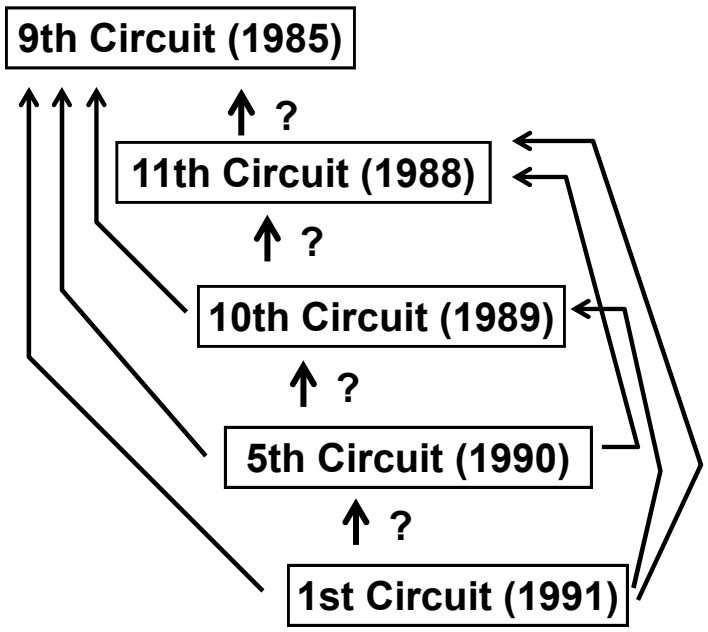

Figure 1: Visual representation of the creation of a hypothetical legal rule by the Ninth Circuit that is addressed by four subsequent progeny cases on the Eleventh, Tenth, Fifth, and First Circuits.

	instopinion	prevopinion	citation	treatment
1	11th	9th	0	.
2	10th	9th	1	Positive
3	10th	11th	0	.
4	5th	9th	1	Positive
5	5th	11th	1	Neutral
6	5th	10th	0	.
7	1st	9th	0	.
8	1st	11th	0	.
9	1st	10th	0	.
10	1st	5th	1	Negative

Figure 2: Rectangularization of case linkages for the hypothetical legal rule portrayed in Figure 1.

Examination of each rule-creating case and its progeny cases (i.e., the cases that followed it) provides unique empirical leverage to understand the dynamics of citation usage. In particular, by isolating cases that present the same legal question, these data identify, for any instant case in the string of progeny cases, the set of previous cases that are legally relevant. An example illustrates. In 1986, the Eleventh Circuit announced a legal rule in which the "test for [the] validity of an allegedly pretextual stop is whether a reasonable officer would have made the seizure in the absence of illegitimate motivation" (Klein 2002, 150). Four months later, the Fifth Circuit decided a case posing the same legal question. At this point in the stream of progeny, there was only one legally relevant previous opinion: the Eleventh Circuit's. As the sequence in the progeny cases advances, the population of legally relevant previous opinions increases. For this particular rule, there were a total of eighteen progeny cases, which means that the last case in the line had a pool of eighteen relevant opinions to draw from (seventeen progeny cases plus the Eleventh Circuit's original opinion). Similarly, the seventeenth case had seventeen, and so on.

Importantly, these data identify, for each instant case, a population of previous cases that are legally relevant.[12] This permits the ex ante identification of a pool of relevant previous opinions that an instant opinion could cite. One then simply codes whether relevant previous cases *are cited* (i.e., the 1's) and instances where relevant previous cases *are not cited* (i.e., the 0's), thereby overcoming the crucial problem plaguing previous citation studies.

Data and Measurement

Dependent Variable

My dependent variable is whether an instant case in a line of progeny cited back to each previous case that came before it. These data come from the 81 rules and 300 subsequent court cases initially identified by Klein (2002, 147-167). For each of these subsequent cases I read the opinion and coded whether the instant case cited the previous case(s). On average, each new legal rule was followed by 3.70 progeny cases that posed the same question. The number of progeny cases ranges between 1 and 18 with a standard deviation of 2.96. The total number of potential citations used in this analysis is 1048.

Independent Variables

To operationalize my three hypotheses, I include the following variables. First, recall that the *Opinion Outcome Hypothesis* argues that judges are more likely to cite a previous decision when the outcome in that previous decision is consistent with the current judge's preferred policy outcome. To operationalize this

[12]There could be other cases that are legally relevant if the opinion addresses more than one legal question. These data are structured in such a way that a single opinion *can* create multiple legal rules. Aspects of opinions that addressed issues outside of the rule issue areas were ignored.

hypothesis, I examine the ideological direction of the outcome in the previous and instant cases. When both the previous and instant cases are decided in the same direction (i.e., both conservative or both liberal), I code *Outcome Support* as 1. Conversely, when there is heterogeneity across the instant and previous decisions, I code *Policy Support* as 0.[13]

With the *Opinion Basis Hypothesis*, I argue that judges will be more likely to cite previous opinions when their rationale agrees with that of the instant opinion author. That is, judges have preferences over both outcomes and the arguments used to reach or justify those outcomes. To operationalize that concept, I turn to a measure of a judge's ideology. In so doing I follow the insights of others who have argued that an opinion's content will reflect a judge's ideological beliefs (Songer and Haire 1992; Hettinger, Lindquist and Martinek 2003*a*,*b*, 2004, 2006). Specifically, I first identified the opinion authors in both the previous and the instant cases. To place these judges in the same ideological space, I used their Judicial Common Space (JCS) score (Epstein et al. 2007).[14] *Author Ideological Compatibility* is measured as the absolute value of the difference between the two opinion authors' JCS scores.

To capture variation in the authoritativeness of a previous opinion, I include *Previous Opinion Vitality*. The goal of the measure is to document the extent to

[13]An alternative to coding cases as being liberal or conservative would be to code whether each adopts or rejects the initial rule. A significant downside to using this approach is that I must throw away the 300 observations where each progeny case either cites or does not cite the rule-announcing case. It is for this reason I elect to proceed as I do, but I also include an additional control variable for whether the previous case was the initial case that announced the legal rule (see below).

[14]These scores follow the Giles, Hettinger and Peppers (2001) approach to measuring a circuit judge's policy preferences. They are scored as follows. Judges for whom there were two home state senators of the president's party receive the average of these senator's common space scores (Poole 1998). Judges with one same-party home state senator receive that senator's score. Last, judges with no same-party home state senator receive the president's common space score. Scores for district court judges serving by designation were created following this same set of coding rules.

which a previous opinion remains good law. To accomplish this, I turn to citation reports produced by *Shepard's* Citations Service. After a case is decided, staff attorneys at *Shepard's* read the opinion and analyze how an instant case substantively treats (i.e., interprets) previous cases. In particular, I operationalize *Previous Opinion Vitality* as the number of times a previous opinion has been positively interpreted minus the number of times it has been negatively interpreted up through (and including) the year before the instant case was decided.[15] This measure is dynamic in that it is updated each year, which allows me to capture changing values for a given previous opinion as the law develops.

Because my theoretical argument suggests a conditional relationship among these variables, I interact *Outcome Support*, *Author Ideological Distance*, and *Previous Opinion Vitality*. Each pairwise combination as well as the individual constitutive terms are also included (Friedrich 1982; Brambor, Clark and Golder 2006; Kam and Franzese 2007).

Control Variables

Beyond my hypotheses of interest, characteristics of both the previous case and the instant case are likely to influence whether a particular previous case is cited. I code *Dissent in Previous Case* as 1 if there was a dissenting opinion written in a previous case; 0 otherwise. As a dissent will provide ammunition for the opposing position taken by a judge, I expect that judges will be less likely to cite a decision with dissent.

As my measure of vitality consists of a difference, it is necessary to control for the overall amount of activity surrounding a previous opinion. I include *Total*

[15]Positive treatment includes *Shepards's* "Following" coding. Negative treatment includes overruling (in part), criticizing, questioning, limiting, and distinguishing. These categories follow the usage of Hansford and Spriggs (2002, 2006), who also show that it is a reliable indicator of legal change (Spriggs and Hansford 2000).

Interpretations of Previous Opinion, which is the sum of the number of positive, negative, and neutral treatments a previous opinion has received up through the year before the instant opinion was decided.[16] As a previous opinion with a large amount of activity should be more likely to be cited in the future, I expect a positive relationship between this variable and the likelihood of citation.

Additionally, I also include *Number of Previous Opinions*, which indicates an instant opinion's place in the stream of progeny cases. As the number of progeny becomes large, the pool of potential cases to interpret will be large, as well. As a result, the odds that a particular opinion is cited will likely go down.

In a related vein, I also include a number of controls that tap into the salience of a previous case. Previous cases that are of higher salience should be more likely to be subsequently cited than their non-salient counterparts. Following the general tack proposed by Epstein and Segal (2000), I include *Previous Case Media Coverage*. This varaible takes on a value of 1 if the previous opinion received coverage in *U.S. Law Week*, which is a legal periodical that seeks to "[alert] the legal profession to the most important cases and why they are important" (LexisNexis Source Information). I code the variable as 0 otherwise. *Rule Announcing Case* is coded as 1 if the previous opinion in question was the initial case that announced a new legal rule. These opinions should be more notable and visible than others coming after it. As a final salience control I also include *Previous Case Amicus* and *Instant Case Amicus*, which is measured as the number of amicus curiae briefs filed in the previous and instant cases, respectively.[17]

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[16]I code neutral treatment as existing when an instant opinion explains or notes among conflicting authority a previous opinion.

[17]A recent line of research about the role of amicus curiae at the Supreme Court persuasively suggests that amicus participation is actually an indicator of a case's complexity and not salience (Collins 2008*a*,*b*). The mechanism for this argument lies in (1) the normalcy with which amici now participate and (2) their ability to provide external perspectives to the justices. I argue that amici participation at

I also include *Previous Case from Own Circuit*, which takes on a value of 1 if the previous opinion and instant opinion are from the same circuit and zero otherwise. For both legal and collegial reasons, I predict that judges will be more likely to cite decisions coming from their own circuit.[18] Because a voluminous literature suggests some judges are more persuasive or influential than others (e.g., Lindquist and Klein 2006), I include *Previous Opinion Author Prestige*. This variable follows the general approach advocated by Klein and Morrisroe (1999) and is coded as the total number of times in the four years before the instant opinion was decided that the author of the previous opinion was cited *by name* in a circuit court opinion—including both majority and separate opinions—outside of his or her home circuit.[19] Previous opinions authored by judges with more named citations should be more likely to be cited, all else equal.

Finally, the workload of the courts of appeals is immense. Circuit judges participate in thousands of cases each year and write many more opinions than their counterparts on the Supreme Court. All of this is done with a smaller number of law clerks, as well (Cohen 2002). Moreover, discovering previous decisions is likely to be time consuming. From this, I suggest two basic empirical consequences. First, recently decided cases are more likely to fly under a judge's radar and should be, as a result, less likely to be cited than older previous opinions (Songer 1988). Second, as the instant circuit's workload increases, the time spent by a judge and her staff on

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the circuit court level still taps into salience as participation is both exceedingly rare and generally limited to advocating for one side over the other (Collins and Martinek 2008).

[18]Within a single circuit, a previous court decision is considered binding precedent. Opinions from other circuits are not, however (Cross 2007).

[19]Klein and Morrisroe (1999) argue that while an opinion author needs to cite previous decisions in an instant opinion, it is entirely within his or her discretion to cite the case name or include the name of the judge authoring the opinion. Excluding a judge's home circuit is necessary as collegiality norms within a circuit encourage named citations as a matter of course.

any particular opinion will decrease. This will deflate the likelihood that a previous case will be cited. Consistent with this, *Previous Case Age* is the amount of time—measured in days—between when the previous and instant cases were decided. To capture a previous opinion's relative position in the order of available opinions, I also include *Previous Opinion Sequence*, which is coded as a previous case's position in the pool of extant opinions that are legally relevant. For a measure of a circuit's workload, I include *Instant Circuit Workload*, which is the total number of published opinions released by the circuit during the year that the instant case was decided.[20]

Methods and Results

As the dependent variable is dichotomous in nature, I estimate a logistic regression model.[21] The parameter estimates and substantive effects (for control variables) are presented in Table 1. The model correctly predicts just over 70 percent of the outcomes and reduces prediction errors by slightly more than 40 percent over simply guessing the modal category of non-citation.

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[20]Operationalizing either *Previous Case Age* or *Instant Circuit Workload* as their natural logarithm does not affect the results described below.

[21]As described above, my control variables already account for a variety of factors specific to the sequence in which both a previous and progeny case occur. Because there still might be some unmeasured dependence within a particular legal rule, I deploy robust standard errors clustered on each of the 81 unique legal rules to address any remaining concerns about heteroskedasticity.

Relatedly, while in the bivariate context I must reject the null hypothesis of no relationship between issue area and citation rates ($p < 0.05$), if I reestimate my model and include fixed effects for issue area, none of the substantive results described below are affected; what is more, a series of pairwise Wald tests reveal no statistically meaningful differences in the citation propensity across issue area.

Variable	**Coefficient**	**Robust S.E.**
Outcome Support	0.291	0.185
Previous Opinion Vitality	0.054	0.074
Author Ideological Distance	-0.176	0.273
Outcome Support x Author Distance	0.157	0.295
Vitality x Author Distance	-0.328	0.176
Outcome Support x Vitality	-0.070	0.081
Outcome Support x Vitality x Author Distance	0.333	0.185
Dissent in Previous Case	0.263*	0.126
Total Interpretations of Previous Opinion	0.028*	0.012
Number of Previous Opinions	-0.118*	0.021
Previous Case From Own Circuit	1.017*	0.215
Previous Case Media Coverage	0.300*	0.087
Rule Announcing Case	0.636*	0.152
Previous Opinion Author Prestige	0.007	0.004
Previous Case Amicus	0.062	0.040
Instant Case Amicus	0.063*	0.021
Instant Circuit Workload	-0.000	0.000
Previous Opinion Age	0.000	0.000
Previous Opinion Sequence	0.097*	0.039
Constant	-0.616*	0.176
Observations	1048	
Log Likelihood	-595.820	
Pseudo R2	0.180	
Percent Correctly Predicted	70.3	
Percent Reduction in Error	40.3	

Table 1: Logistic regression model of citation by an instant case to a previous case. * denotes $p < 0.05$ (two-tailed test). Robust standard errors clustered on legal rule are reported in the third column.

The various control variables perform largely as expected: judges are more likely to cite cases when the previous opinion came from their own circuit, when the previous case was salient, and when it was the initial case that announced a legal rule. Additionally, when the case under consideration is of higher salience, a judge is more likely to cite any previous opinion, as well.[22]

[22]An alternative explanation for this lattermost result is that amicus briefs simply provide information to judges not necessarily found in the litigants briefs (Spriggs and Wahlbeck 1997). Given the potential informational role of amicus curiae briefs, this finding could be driven not by an instant case's latent salience but by the actual

In the context of the interactive variables, the parameter estimates are of little use in interpreting either the substantive *or* statistical significance of the independent variables (Brambor, Clark and Golder 2006; Kam and Franzese 2007; King, Tomz and Wittenberg 2000). Accordingly, I turn to stochastic simulations to further explicate the nature of my results. For these simulations, all other variables are held at either their mean or modal values, as appropriate.

My main hypotheses concern the extent to which a previous opinion's outcome, basis, and vitality influence the likelihood that it is cited in an instant case. Figure 3 presents the effect of *Author Ideological Distance* (x-axis) and *Previous Opinion Vitality* (y-axis) in previous cases that *do not* support an instant case's disposition (i.e., *Outcome Support* equals 0). Probability of citation is displayed by the varying color contours on the plot, with darker colors corresponding to higher probabilities and lighter colors corresponding to lower probabilities.

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information contained within it. Given the difficulty of accessing circuit court briefs (see footnote 7), I cannot examine the briefs to see if this is true.

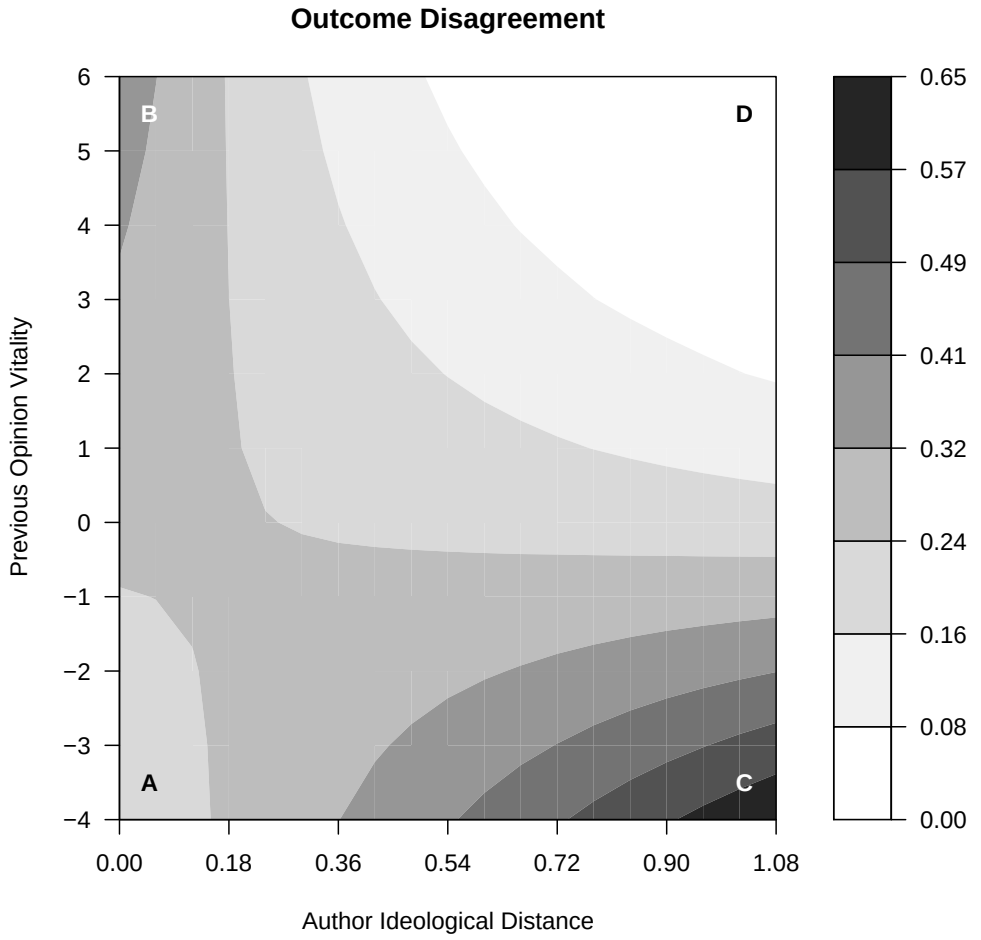

Figure 3: Predicted probability that an instant opinion cites a previous court opinion when there is disagreement between the two cases' outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability is displayed by the grayscale gradient on the plot, with darker shades indicating high probability and lighter shades indicating lower probability. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate. A, B, C, and D note hypotheticals discussed in the text.

While contour plots such as these provide an easy way to understand how two continuous or near continuous variables condition a third variable such as the probability of an event occurring, a key limitation is their inability to display uncertainty around these point estimates. Fortunately, such elements are readily recoverable

from the same simulations that generated these point estimates. To aid interpretation and discussion I have annotated the plot with four letters: A, B, C, and D.

When a judge is contemplating citing a previous opinion that reaches an outcome that is contrary to the outcome she wishes to reach in a case, my results suggest that while legal considerations can matter, they are strongly conditioned by policy preferences. When the author of the previous opinion is ideologically close to the instant judge, she is more likely to cite a previous opinion when its authoritativeness is higher than when it is lower. This is to say that the probability associated with point B in Figure 3 is higher than it is for point A.[23]

On face, this would appear to be evidence that legal considerations—namely the authoritativeness of a previous opinion—influence the judge in the instant opinion. If this were true, then I would expect to observe a similar relationship when the ideological distance between the previous and instant opinion author is high, as well. As revealed by comparing points C and D in Figure 3, however, the effect of the relationship is actually *reversed*. When the ideological distance between two judges is high and the previous opinion has high vitality (point D), an instant opinion author is actually *less* likely to cite it than when distance is high and vitality is low (point C) (the probability that C is greater than D is 0.99).

[23]The probability that point B is higher than point A is 0.77. To make this statement—and others like it below—I took 25,000 draws from a multivariate normal distribution whose means consisted of the parameter estimates of β reported in Table 1. The covariance matrix for the distribution came from the variance-covariance matrix underlying the same model (not reported, but available upon request from the author). I then computed two quantities of interest: Pr(Cite | A) and Pr(Cite | B), which correspond to the probability of citation given the hypothetical values for point A and point B, respectively. Each of these calculations was performed for each draw taken from the multivariate distribution (i.e., 25,000 times each). I then examined the difference between A and B, which also yielded 25,000 values. The 0.86 value means that in 77 percent of these 25,000 comparisons (i.e., roughly 19,250), the value of B was larger than the value for A.

Similar results emerge if one considers the relationship between points B-D and and A-C. When a previous opinion is highly vital, a judge is much more likely to cite it when the author is a presumed ideological ally (i.e., point B) than when she is an opponent (i.e., point D) (the probability of D being smaller than B is 0.98). Interestingly, the effect of distance is reversed when the previous opinion is less vital. That is, in comparing points A and C, the results suggest that an opinion author is actually *more* likely to cite a previous opinion of low vitality when the opinion author is ideologically distant (point C) than when she is close (point A) (probability of point C being higher than point A is 0.93).

To summarize the results from this single panel, I find strong evidence that while legal considerations matter, they appear to be considered selectively by otherwise policy-minded judges. When the author in an instant case is confronted with a previous opinion whose outcome she disagrees with, she opts to cite legally authoritative opinions of ideological allies while avoiding authoritative opinions of her opponents. When a previous opinion is not legally vital, the effect is reversed and she cites ill-treated opinions written by opponents while ignoring those written by her allies.

Though informative, Figure 3 only tells half of the story.[24] What happens when there is agreement between a previous opinion's outcome and the outcome of the case being decided? Figure 4 presents the same quantities of interest when *Outcome Support* equals 1. Two differences between this figure and the previous one immediately stand out. First, whereas the previous figure had significant variation in the the likelihood of citation (i.e., many different shades displayed on the plot), the story for when there is outcome agreement is far less variable. Relatedly, while the previous figure had numerous changes in the contours on the x and y axes, here,

[24]Strictly speaking, as *Outcome Support* equals 1 in approximately 70 percent of the observations, Figure 3 only tells 30 percent of the story.

again, the story is much less complicated.

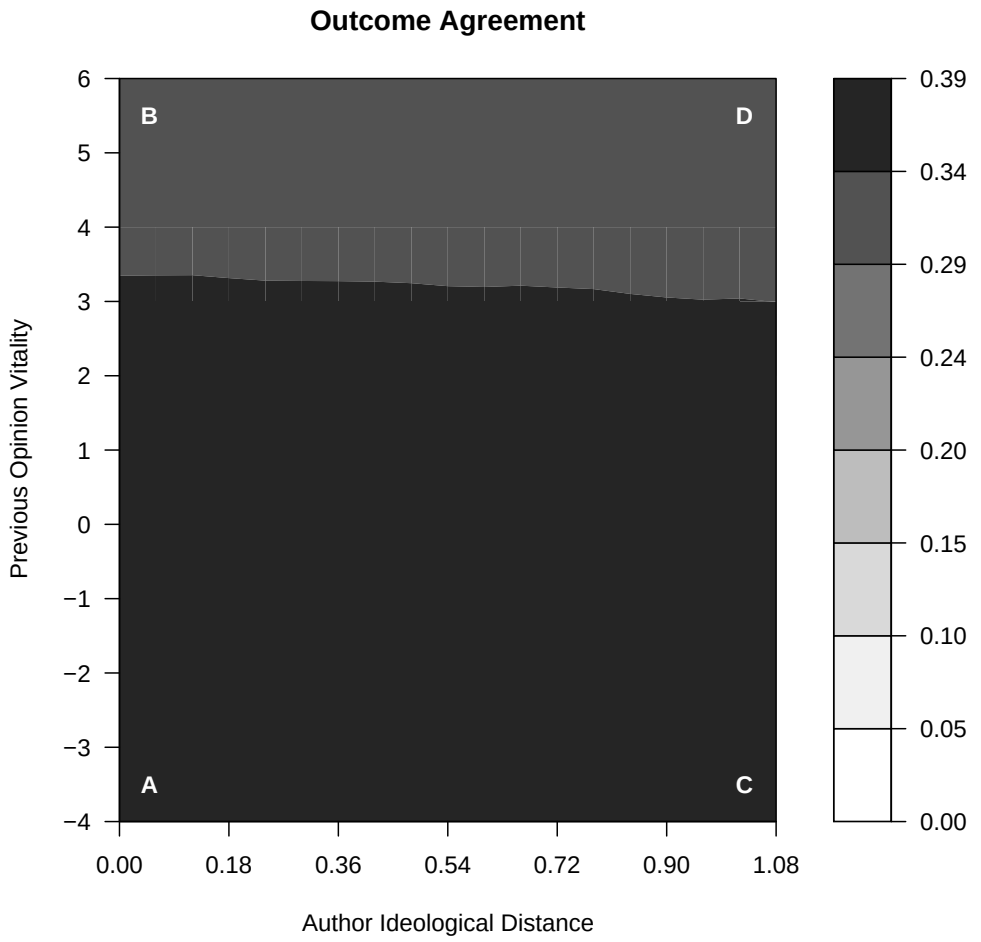

Figure 4: Predicted probability that an instant opinion cites a previous court opinion when there is agreement between the two cases' outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability is displayed by the grayscale gradient on the plot, with darker shades indicating high probability and lighter shades indicating lower probability. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate. A, B, C, and D note hypotheticals discussed in the text.

What little variation there is in Figure 4, the magnitude of it is considerably weaker than in the previous panel. Once agreement in the overall outcome is accounted for, the added effect of legal vitality is very slim. In other words, when

comparing points A-B and C-D, the addition of legal vitality exerts a relatively small effect on the likelihood that a previous opinion is cited.[25] As the color variation suggests, among opinions of both high and low vitality, once specific agreement is accounted for, the ideological distance between two authors has no reliable effect.[26]

The discussion of these results has, so far, focused on examining outcome agreement vs. disagreement separately. While this has shed additional light on how judges appear to selectively—and instrumentally—use legal considerations to further their policy goals, the most complete way to understand how these three factors—outcome, basis, and vitality—operate is to examine the effect that ideological distance and vitality have on the *difference* in probability between a previous opinion that supports the instant author's outcome versus one that does not. Figure 5 does just that.

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[25]The probability that point A is, by the same set of calculations described in footnote 23, larger than point B is only 0.71. For high values of ideological distance (i.e., point C vs. point D), the probability that C is larger than D is only slightly higher than a coin toss—0.58.

[26]The probability that point A is larger than point C is 0.55; the same quantity for the D-B points is 0.51 (with D being only slightly favored).

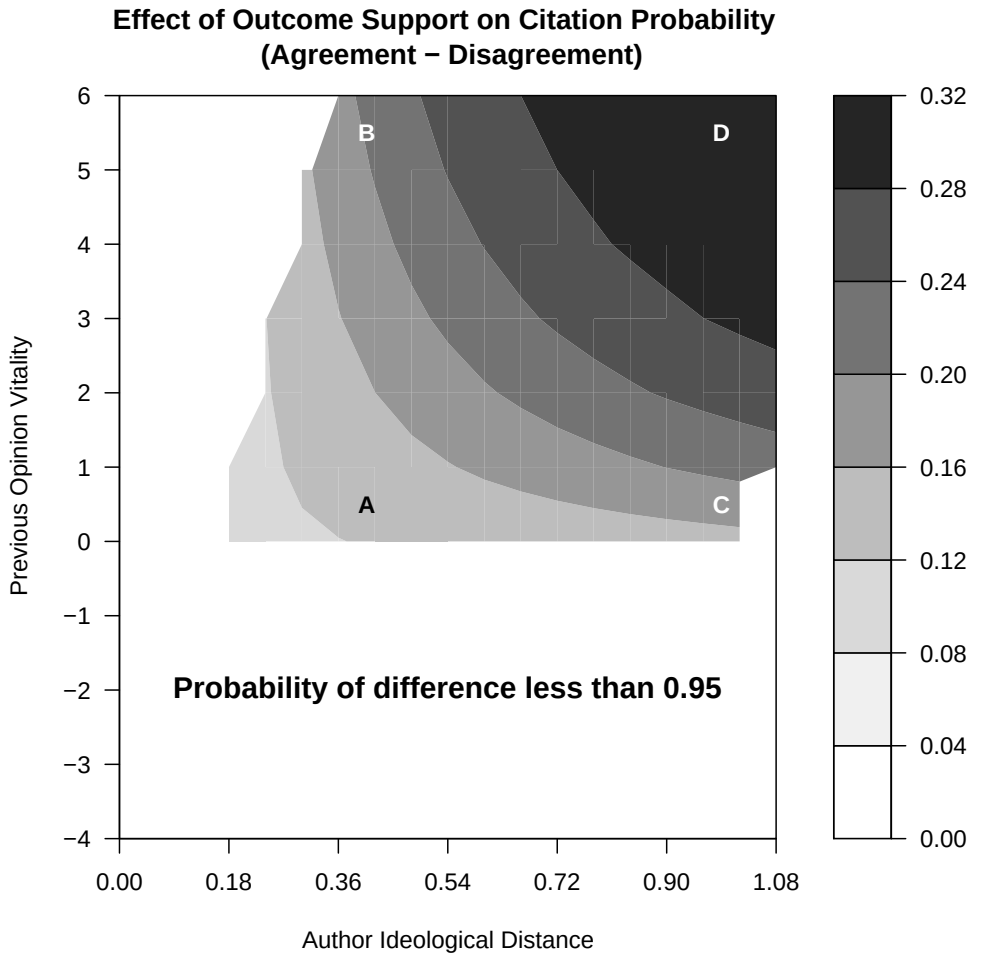

Figure 5: Difference in predicted probability that an instant opinion cites a previous court opinion when there is disagreement between the two cases' outcomes versus agreement between the outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability differences are displayed by the grayscale gradient on the plot, with darker shades larger differences and lighter shades indicating smaller ones. The white region of the plot denotes combinations of vitality and ideological distance for which the probability of a difference between a hypothetical with agreement versus disagreement was less than 0.95 (using the same procedure described in footnote 23. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate.

The x and y axes remain the same. The plotted values now display, however, the difference in probability between a previous opinion where *Outcome Support*

equals one versus a previous opinion where the variable equals zero. Note, initially, that when a previous opinion has a negative net value of vitality (i.e., *Previous Opinion Vitality* is less than zero), there is no systematic difference in the likelihood of citation, regardless of the distance between two opinion authors. This indicates a strong role for legal considerations during the opinion writing process. While a previous opinion that supports a judge's intended case outcome is desirable, this finding suggests that opinion authors believe they have little to gain in persuasion by citing previous opinions that are regarded as being "bad law." From this view, policy-seeking behavior by circuit court judges is ultimately conditioned by legal considerations.

This is not to say that policy considerations are unimportant, however. Consider the vertical region where no difference between outcome agreement and disagreement exists—mainly where legal vitality is positive and author distance is relatively low. When a previous opinion is regarded as being good law and the author of the previous opinion is relatively close, the judge in the current case pays no attention to whether the previous opinion's disposition is the same as the one she intends to reach. Additionally, note that the size of this "null zone" increases (i.e., gets wider) as legal vitality increases. This is to say that the amount of ideological distance that an instant opinion author is willing to tolerate actually *increases* as a previous opinion's vitality goes up. There appears to be, in other words, a difference between *good* previous law and *great* previous law.

In terms of the rest of the figure, the results reiterate several of the trends found in the previous figures. For both lower and high values of ideological distance, the addition of legal vitality increases the advantage provided to a previous opinion that agrees with the instant outcome.[27] Moreover, the magnitude of this difference

[27]Compare, that is, the pairings of A-B and C-D. The probability that B is higher than A is 0.79. The probability that D is higher than C is 0.92.

is actually increasing in ideological distance. The change in probability from point A to point B is roughly 0.07 but the change in probability from point C to point D is 0.17.[28]

Second, holding constant legal vitality, if an instant opinion author has the ability to select from a previous opinion written by an ideological ally versus an opponent, the author will prefer the opinion written by an opponent (points D and C) over the one written by an ally (points B and A).[29] Of course, as the darkest—and therefore most likely–region of the plot resides in the upper-right corner of the figure, an opinion author is most likely to cite a previous opinion that is both highly vital and written by someone with whom the opinion author generally disagrees. This finding is consistent with the conjecture offered by Judge Patricia Wald of the D.C. Circuit, who notes a judge might cite an ideological opponent with a higher likelihood than you do an ideological ally, "to demonstrate the universality of the principles [you] are advocating" (Wald 1995, 1400).[30]

Discussion

This study makes important contributions to a variety of questions in the study of law and judicial behavior. The first stems from the research design. As I suggest above, the chief difficulty in systematically studying citation practices is arriving at an appropriate ex ante definition of what previous opinions *could* be

[28]Using the same general procedure outline in footnote 23, I can examine the distribution of the difference between the A-B and C-D differences. In so doing, I find that the probability that the C-D difference is larger than the A-B difference is 0.81.

[29]This compares the pairings of B-D, where D is larger than B with a 0.90 probability, and A-C, where C is larger than A with a probability of 0.69.

[30]One might also consider this useful information that comes from a "biased" source, which has been formalized by Calvert (1985).

cited. Earlier efforts in the circuit court context have ultimately used data that are ill-suited for testing the nuanced hypotheses required by a well-developed theory. This paper is the first to test any theory of citations where the unit of analysis is measured at the level of an individual citation.

In leveraging this unique research design, I find that judges on the circuit courts are sophisticated users of previous court opinions. In mustering support for their desired legal policy outcome, judges are not random in selecting the previous opinions that they appeal to. Nor do they behave in a strictly attitudinal matter and cite only cases that agree with their desired policy outcome. Instead, the evidence suggests that they balance policy and legal considerations in their citation of legal authority. While judges tend to cite previous opinions whose outcomes agree with the case at hand, this effect depends on the authoritativeness of a previous opinion. When the previous opinion is regarded as being less authoritative, its persuasive value to a judge in the instant case decreases dramatically and, so too does its likelihood of citation. I also find that, when possible, judges prefer to enlist the previous opinions of their ideological opponents to buttress the policy outcome in an instant case.

While my results make an important advance in understanding judicial behavior at the circuit court level, they also highlight some potential limitations to using citations as indicators of other latent variables of interest. Citations from one court opinion to another have been proposed as a way of studying a myriad of important concepts, including the influence or prestige of individual judges (Klein and Morrisroe 1999), compliance within the federal judicial hierarchy (Westerland et al. 2006), legal development (Hansford and Spriggs 2006; Spriggs and Hansford 2001, 2002), and the relative importance of cases in the network of law (Fowler et al. 2007).

At first blush these legal topics might seem to be tremendously different, yet

they share one important attribute in common: each assumes that using the *observed* citations contained within a particular court opinion is theoretically valid and an unbiased indicator of the broad substantive topic of interest. More specifically, these uses of citations require that the *failure* of a particular court opinion to cite a previous court opinion is not systematically related to the concept of interest.

By examining only a subset of relevant previous opinions (and when they are cited), the results I obtain here suggest that this condition will often not be satisfied. An example illustrates. In studying the development of legal precedent, scholars suggest that the author of a particular opinion can "treat" a previous opinion positively, negatively, or neutrally (Hansford and Spriggs 2006). In this instance, then, one of two statements must be true for the usage of legal citations to be appropriate. First, judges need to treat *all* applicable previous precedents in their opinions. Or, alternatively, there must be no selection effect. That is, a systematic relationship cannot exist between (a) the likelihood an applicable precedent was treated at all and (b) the type of treatment it would have receive if it were treated.

In the context of the circuit courts,[31] neither assumption is likely to hold. Judges are systematically more likely to cite opinions that agree with their desired outcome. This also implies, by extension, that using citations as evidence of "shirking" by a lower court of a superior court's decision (e.g., Westerland et al. 2006) is likely to be inappropriate, as well. Why would a lower court draw attention to its non-compliance when the easiest strategy is to simply not cite the relevant decision at all?

In short, while opinion citations can offer, to borrow from a recent article

[31]Spriggs and Hansford (2000) argue that, owing to the presence of nine justices and numerous law clerks, the avoidance of a relevant Supreme Court precedent is exceptionally unlikely. In the Supreme Court context this argument is likely true, but with only (on average) three judges, fewer clerks, and a much larger caseload, the argument is almost certainly not true on the circuit courts.

title, a "window into the behavior of judges" (Choi and Gulati 2008), they are ultimately another tool used by sophisticated policy-seeking judges. As such, they have significant limitations in what they can potentially tell us about other aspects in the study of law and courts and, importantly, these limitations will likely vary based upon institutional setting. While circuit courts are the "vital center of the federal judicial system" (Lumbard 1968, 29) and certainly worthy of additional scholarly attention, studies that fail to heed the considerations I raise above will risk biasing both the measures they use and the results they obtain.

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Legal Development on the U.S. Courts of Appeals

Abstract

The U.S. Courts of Appeals are the appellate workhorse of the American judiciary. In this paper I provide a preliminary analysis of the process by which circuit judges develop the law through substantively interpreting previous circuit court decisions. I test the proposition that, much like their counterparts on the Supreme Court, the behavior of circuit court judges is driven by policy and legalistic considerations. Using case data from several diverse issue areas, I find robust support for this argument.

Nested in the middle of the judicial hierarchy, the courts of appeals are a crucial actor in the judicial hierarchy. While only the U.S. Supreme Court can, in a single action, create national policy, the circuit courts create legal policy in areas where the Court has not yet ruled (i.e., cases of first impression) and by further interpreting areas of law where the Court has already spoken. Although the Supreme Court ultimately has the authority to review circuit court decisions, the rarity with which the Court exercises this ability nearly guarantees that the circuit courts are the courts of last for resort for all but the smallest number of litigants. As a result, circuit court judges have significant policy-making power.

While many have, for some time now, recognized the importance of the circuit courts, existing scholarship predominantly focuses on the dispositional aspect of cases. In other words, the object of inquiry focuses on whether the opinion is liberal or conservative (e.g., Songer and Haire 1992), overturns the decision of the trial court (e.g., Hettinger, Lindquist and Martinek 2006), or contains a dissenting opinion (e.g., Songer 1982). While case outcomes such as these are undoubtedly important, they can only present a partial view of the work conducted by *any* type of court, whether it is a court of last resort, intermediate court, or trial court. As Friedman cogently notes: "In common law systems, law is found primarily in legal opinions, not divined from the outcomes of cases [. . .] In judicial opinions are found the rules that govern the next case, and thus the conduct of institutions and actors in society" (Friedman 2006, 266). More specifically, judges develop law through the creation and modification of legal precedents in their written opinions. Describing the U.S. Supreme Court, Hansford and Spriggs (2006, 5-6) note:

> The Court rarely defines doctrines in a comprehensive or complete manner in any one opinion. It sometimes takes a series of opinions to clarify a rule, fill in important details, and define its scope or breadth. When Court opinions legally treat or interpret an existing precedent they shape it by restricting or broadening its applicability [citations omitted].

This statement is equally applicable to the circuit courts. Moreover, the courts of appeals provide an even more fascinating laboratory to examine legal development because, as a practical matter, one circuit court is under no obligation to follow the decisions of a peer circuit (Cross 2007).

In this paper I seek to examine how judges on the circuit courts modify law through their written opinions. I argue that judges are active seekers of legal policy but must also weigh legal considerations when attempting to change the law to reflect their preferred policy outcomes. Using data on the creation and subsequent promulgation of legal rules across the areas of criminal procedure, environmental regulation, and antitrust law, I test this intuition by examining how judges interpret previous legally relevant decisions. Importantly, by focusing on novel legal issues, my research design allows me to exogenously control for the potentially confounding effect of existing Supreme Court precedents. I find strong evidence that circuit judges are influenced by an interactive combination of policy and legal considerations.

Theory and Hypotheses

It borders on a truism to say that the behavior of Supreme Court justices is driven by their policy preferences (e.g., Segal and Spaeth 1993, 2002). Beyond attitudes, scholars also acknowledge justices are not wholly unconstrained in their pursuit of policy (Epstein and Knight 1998). The Court and the justices who comprise it operate within a complicated political environment where numerous factors—both internal and external—must be accounted for (e.g., Maltzman, Spriggs and Wahlbeck 2000).

In recent years, scholars have taken this view of judicial decision making and applied it to the process by which justices interpret the Court's precedents. As

Hansford and Spriggs (2006) argue, policy considerations and legal considerations interact to influence the interpretation of precedent. As one might expect, their theory suggests that justices are more likely to positively (negatively) interpret precedents that they favor (disfavor). The legal consideration addressed by their theory is the authoritativeness or vitality of a decision. In writing a new opinion, justices on the Court want their opinion to be viewed as legitimate. As Hansford and Spriggs suggest, "By increasing the perceived legitimacy of a decision, the Court improves the prospect that the decision will be implemented, enforced, and thus efficacious" (2006, 30). Accordingly, in creating legal policy, justices will prefer to bolster their claims by interpreting precedents that have been positively interpreted in the past.

Vitality, as a legitimizing force, can operate as a constraint on a justice's behavior. It can also provide an opportunity for a policy-seeking justice. This opportunity stems from the fact that a precedent's vitality is dynamic. Weak precedents can be revived and the authority of strong precedents can be decreased. All of this is done through subsequent interpretations by the Court. For a policy-minded justice, the largest benefit comes from supporting weak precedents that she agrees with while undermining strong ones with which she disagrees.

Here, I seek to examine the extent to which Hansford and Spriggs' model provides useful leverage in explaining precedent interpretation on the circuit courts. Before describing these hypotheses, however, it is necessary to first justify the application of a theory tailored for the Supreme Court on the circuit courts.[1] In other words, is it reasonable to believe that circuit judges, much like their Supreme Court counterparts, are motivated by policy considerations? As a long line of empirical

[1]Hansford and Spriggs note that while their theory is likely applicable in a variety of courts, it will require modification depending on institutional variation between the Supreme Court and the other court of interest (2006, 42). I do not disagree with this argument, however, given the nature of the data used in my study, I ultimately argue that the key institutional differences between the Supreme Court and the circuit courts are largely eliminated (see below).

research suggests that policy considerations—and the attitudes underlying them—influence judges' votes (e.g., Songer and Haire 1992; Hettinger, Lindquist and Martinek 2003*b*, 2004, 2006), I believe the answer to this question is a hearty—though not unequivocal—"yes."

While there is little doubt that circuit judges will sometimes behave in a manner similar to their Supreme Court brethren, institutional attributes of the circuit courts potentially reduce the frequency of this behavior. Unlike the Supreme Court, for example, the circuit courts lack a discretionary docket and are unable to entirely avoid clearly meritless cases. Circuit judges can, however, dispose of such cases in unpublished opinions. Empirical evidence suggests they do so in a way that is (generally) unaffected by ideological concerns (e.g., Law 2006; Keele et al. 2009; cf. Law 2005). In a related vein, Songer, Ginn and Sarver (2003) find that in a nontrivial number of cases where a circuit judge is completely insulated from reversal and, therefore, entirely free to pursue policy, the judge still opts to decide cases in a manner consistent with the law (and inconsistent with her policy preferences).

Ultimately, the literature provides sufficient prima facie support for testing a theoretical model initially developed for the Supreme Court.[2] If anything, the sometimes discordant results of previous studies beg for an analysis that moves beyond judge votes or case dispositions and attempts to understand the actual crafting of legal policy. Accordingly, I adopt the six hypotheses governing the positive or negative interpretation of previous decisions proposed by Hansford and Spriggs (2006, 32-33, 37). I discuss each type of interpretation in turn.

In the context of positive interpretation, holding constant the level of vitality,

[2]Though hardly dispositive, the (anonymous) words of circuit judges themselves support the same conclusion. Said one such judge to Klein, "The art of judging consists in trying to produce just results within the constraints of legality" (2002, 24).

judges will be more likely to positively interpret previous decisions that comport with their own policy preferences. As distance increases, however, its impact will be felt more strongly (i.e., with a reduced likelihood of positive interpretation) for previous cases that are of low vitality. That is, a judge obtains the strongest policy benefit by reviving weak opinions with which she agrees as opposed to weak opinions that she opposes. And, among previous decisions that a judge disagrees with on policy grounds, a judge should be more likely to positively interpret one that is of high vitality than one that is of low vitality. As the previous two statements demonstrate, law can function as both an opportunity for justices (in the case of reviving a weak precedent) or a constraint (in the case of equally-distant previous decisions). Stated in other words:

Positive Interpretation H1: As the ideological distance between a previous decision and the panel increases, the probability of positive interpretation will decrease.

Positive Interpretation H2: As the vitality of a previous decision increases, the negative effect of ideological distance on the likelihood of positive interpretation will decrease.

Positive Interpretation H3: For a previous decision that is ideologically distant from the deciding panel, increases in the previous decision's vitality will increase the probability of positive interpretation.

The story for negative interpretation is similar. Ideologically distant previous decisions are more ripe for negative interpretation than those that are proximate. Unlike positive interpretation, however, more vital previous decisions actually provide an *incentive* for a judge to negatively interpret that decision. This is true because a judge stands to gain more from chipping away at a "strong" previous opinion than piling on additional negative treatments to a case that is already

weak. Finally, when faced with a previous decision that is ideologically proximate, a judge will be least likely to negatively interpret it when the opinion's vitality is high. Thus:

Negative Interpretation H1: As the ideological distance between a previous decision and the panel increases, the probability of negative interpretation will increase.

Negative Interpretation H2: As the vitality of a previous decision increases, the positive effect of ideological distance on the likelihood of negative interpretation will increase.

Negative Interpretation H3: For a previous decision that is ideologically proximate to the deciding panel, increases in the previous decision's vitality will depress the probability of negative interpretation.

To recapitulate, the theory I seek to test argues that the interpretation of previous circuit decisions by a current panel will be a function of both policy and jurisprudential considerations.[3] I turn next to describing the data and measures used to test these various hypotheses.

Data and Measurement

The Cases

Studying the positive and negative treatment of previous decisions by an "instant opinion" requires, of course, an ex ante identification of the population

[3]Note that there is no specific prediction for the effect of vitality on the likelihood of positive (negative) interpretation when a previous decision is ideologically proximate (distant) from the instant panel. This follows from Hansford and Spriggs' theory, which does not specify the relative weight of vitality under such conditions (2006, 34, 38).

of previous decisions that could be interpreted.[4] An important initial question, then, is how should one go about identifying these cases? Focusing on the Supreme Court's interpretation of its own precedent, Hansford and Spriggs (2006) take an inclusive approach and suggest that *all* previously-decided precedents are eligible for interpretation. Their dependent variable is whether (in a given year) the Court positively—or negatively—interpreted a particular previous decision.[5] As the number of available circuit court decisions dwarfs that of the Supreme Court, such an approach is not practically feasible in the study at hand.

In lieu of this option, I capitalize on a novel strategy employed by Klein (2002) in his important study of rule creation on the circuit courts. For his study, Klein canvassed the areas of criminal, environmental, and antitrust law to identify a total of 81 legal rules upon which multiple circuit courts rendered judgement.[6]

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[4]Rather than use a variety of strained creative prose to differentiate among old decisions and the current ones, I adopt the following usage scheme: Instant case or opinion refers to the case being decide in the present. Logically, then, previous case (or opinion) corresponds to all of the decisions that came before the instant case that were legally relevant.

[5]The pair make a similar argument in a related study about the Court's decision to overrule its own precedent, where, in a given year, all previously decided cases are "at risk" of being overturned (Spriggs and Hansford 2001).

In previous work on the interpretation and incorporation of precedent, Spriggs and Hansford (2002) restrict the pool of relevant cases to only those cited in the litigant or amicus curiae briefs and conduct their analysis at the individual citation level. They find that this approach omits roughly 10 percent of the precedents the Court goes on to interpret, which explains the difference between the two studies. Using briefs to study the circuit courts is logistically problematic; unlike Supreme Court briefs, the microfiche of which are available in a large number of libraries, no serialized version of courts of appeals briefs exists. Coverage on electronic databases such as Westlaw or LexisNexis appears to be inconsistent and incomplete.

[6]The subject matter breakdown for the number of rules is as follows: search and seizure law, 27; environmental law, 31; antitrust law, 23. In justifying these particular areas, Klein notes they are broadly representaive of the case work done by circuit courts and have widespread impact (2002, 40). To identify the rule-creating opinions, Klein examined casebooks, law review articles, and other research supplements (e.g., *American Law Reports* and *West's Federal Digest*). Progeny cases

These rules were initially adopted between 1981 and 1991 and then addressed by other circuits in a total of 300 subsequent cases decided between the rule's initial adoption and 1995. Importantly, each of these legal rules represented an area of law in which the Supreme Court had not yet ruled. That is, these were, as far as the circuit courts were concerned, new legal questions or issues of first impression. As a result, a convenient benefit to these data is that they allow for the analysis of circuit court judge behavior when there is no vertical constraint imposed by existing Supreme Court precedent.[7]

Examination of each rule-creating case and its progeny cases (i.e., the cases that followed it) provides unique empirical leverage to understand the dynamics of case interpretation. In particular, by isolating cases that present the same legal question, these data identify, for any instant case in the string of progeny cases, the set of previous cases that are legally relevant. An example illustrates. In 1986, the Eleventh Circuit announced a legal rule in which the "test for [the] validity of an allegedly pretextual stop is whether a reasonable officer would have made the seizure in the absence of illegitimate motivation" (Klein 2002, 150). Four months later, the Fifth Circuit decided a case posing the same legal question. At this point in the stream of progeny, there was only one legally relevant previous opinion: the Eleventh Circuit's. As the sequence in the progeny cases advances, the population of legally relevant previous opinions increases. For this particular rule, there were a total of eighteen progeny cases, which means that the last case in the line had a

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were identified using keyword searches and citation indices (Klein 2002, 42).

[7]Of course, it could be the case that circuit court judges attempt to anticipate how the Supreme Court might rule if it were to address a particular legal question. In his analysis of these exact cases, however, Klein (2002) fails to find evidence of such behavior. Interview evidence from circuit court judges (Bowie and Songer 2009) and nearly all existing empirical evidence supports the conclusion that circuit judges do not strategically anticipate the preferences of the Supreme Court (Cross and Tiller 1998; Klein and Hume 2003; Cross 2007; but see Songer, Segal, and Cameron 1994).

pool of eighteen relevant opinions to potentially interpret (seventeen progeny cases plus the Eleventh Circuit's original opinion). Similarly, the seventeenth case had seventeen, and so on.

Figure 1 and Figure 2 provide a graphical portrayal of how this process occurs and how I subsequently adapt it for conducting my empirical analysis. In particular, Figure 1 suggests that the Ninth Circuit initially ruled on an issue of first impression in 1985. In the six years that followed, four additional circuits considered the same legal question. This string of four progeny cases yields a total of eleven usable observations, which are reported in Figure 2, where each one of the potential linkages has been coded for citation and treatment of a previous opinion by an instant opinion. Using the case list presented in Klein (147-167 2002), the legal rules and progeny cases ultimately yielded a total of 1048 potential linkages.

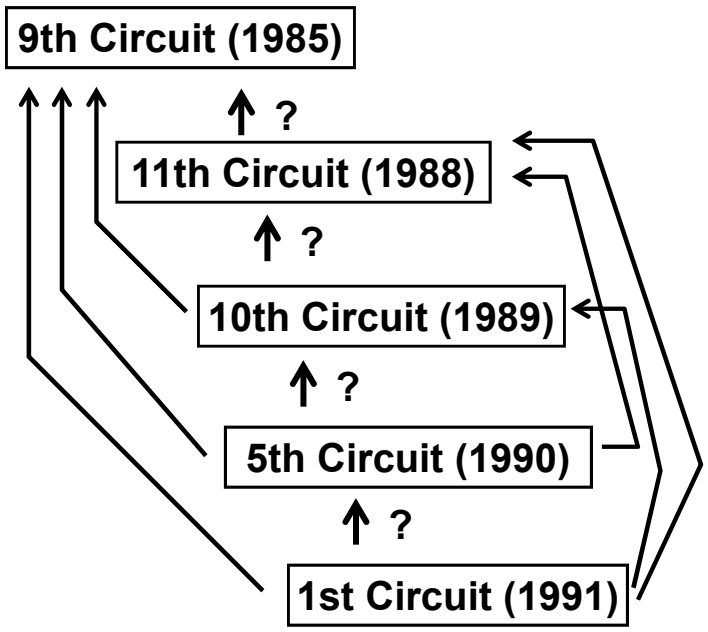

Figure 1: Visual representation of the creation of a hypothetical legal rule by the Ninth Circuit that is addressed by four subsequent progeny cases on the Eleventh, Tenth, Fifth, and First Circuits.

	instopinion	prevopinion	citation	treatment
1	11th	9th	0	.
2	10th	9th	1	Positive
3	10th	11th	0	.
4	5th	9th	1	Positive
5	5th	11th	1	Neutral
6	5th	10th	0	.
7	1st	9th	0	.
8	1st	11th	0	.
9	1st	10th	0	.
10	1st	5th	1	Negative

Figure 2: Rectangularization of case linkages (and plausible interpretations) for the hypothetical rule portrayed in Figure 1.

Dependent Variable

Crucially, these data identify, for each instant case, a population of previous cases that are legally relevant.[8] This permits the ex ante identification of a pool of relevant previous opinions that an instant opinion could substantively interpret. The dependent variable, then, is the type of treatment that an instant opinion gives to a previous decision. To measure this treatment, I turn to reports produced by *Shepard's* Citations Service. After a case is decided, staff attorneys at *Shepard's* read the opinion and assess how an instant case substantively treats (i.e., interprets) previous cases within the opinion. In particular, I code positive treatment when *Shepard's* indicates an instant opinion "followed" a previous opinion. Negative treatment is present when an instant opinion overrules (in part), criticizes, questions, limits, or

[8]There could be other cases that are legally relevant if the opinion addresses more than one legal question. These data are structured in such a way that a single opinion *can* create multiple legal rules. Aspects of opinions that addressed issues outside of the rule issue areas were ignored.

distinguishes a previous opinion.[9] This follows the approach taken by Hansford and Spriggs in their various studies and is one they have demonstrated as being a reliable way of studying legal change (Spriggs and Hansford 2000).[10]

Independent Variables

The six hypotheses of primary interest necessitate an empirical estimate for the level of policy agreement between a previous and instant opinion as well as an indictor of the vitality of the previous opinion. I address each quantity in turn before describing a litany of control variables I also include.

Policy Agreement. Recall that judges are more likely to positively (negatively) interpret a previous case when that decision agrees (disagrees) with the current judge's preferred policy outcome. Accordingly, I examined the ideological direction of the outcome in the previous and instant cases. When both the previous and instant cases are decided in the same direction (i.e., both conservative or both

[9]According to *Shepard's*, in 243 of the 1048 potential linkages does the instant (majority) opinion substantively treat the previous opinion (roughly 23 percent). Within these 243 treatments, 129 are positive, 85 are negative, and 29 are both positive and negative.

[10]I have no basis to believe the *Shepard's* coding is any less accurate or reliable for the circuit courts than it is the Supreme Court. Nevertheless, to empirically examine the validity of this assumption, I examined how KeyCite, a competing citation service provided by Westlaw, coded each of the 1048 potential citations in my data. For positive and negative treatments I found agreement between *Shepard's* and Westlaw in 81 and 93 percent of the observations, respectively. To probe the systematic strenght of this level of agreement, I followed a long line of previous efforts (e.g., Black and Owens 2010; Howard and Segal 2004; Maltzman and Wahlbeck 1996; Spriggs 1997; Spriggs and Hansford 2000; Spriggs and Wahlbeck 1997) and calculated the Kappa statistic for each overall treatment direction. The Kappa statistic essentially permits examination of whether observed agreement between or among coders—or, here, citation services—exceeds levels that one would expect due to chance alone. For positive and negative treatments I obtain a Kappa statistic of 0.35 and 0.66, respectively ($p < 0.001$ for both). According to Landis and Koch (1977, 165) this is evidence of "fair" and "moderate" agreement between *Shepard's* and KeyCite.

liberal), I coded *Outcome Support* as 1. Conversely, when there is heterogeneity across the instant and previous decisions, I coded *Policy Support* as 0.[11]

While *Outcome Support* taps into the basic liberal or conservative nature of a previous case, its measurement is necessarily coarse and likely pools dissimilar observations. A conservative opinion authored by a panel comprised of conservative judges is likely different from a conservative opinion authored by a liberal or ideologically mixed panel of judges. Stated more succinctly, both the disposition *and* content of an opinion will reflect the ideological beliefs of the judges involved in crafting it (Songer and Haire 1992; Hettinger, Lindquist and Martinek 2003*a*,*b*, 2004, 2006). To measure this intuition, I first identified the opinion authors in both the previous and the instant cases. To place these judges in the same ideological space, I then used their Judicial Common Space (JCS) score (Epstein et al. 2007).[12] *Author Ideological Compatibility* is measured as the absolute value of the difference between the two opinion authors' JCS scores.[13]

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[11]It is important to note that this coding procedure does not, unlike the coding rule used in common databases, rely upon the identity of the litigants in a given case. It is, instead, based on the ideological direction of the particular legal rule being studied.

An alternative to coding cases as being liberal or conservative would be to code whether each adopts or rejects the initial rule. A significant downside to using this approach is that I must omit the 300 observations where each progeny case interpret the rule-announcing case. It is for this reason I elect to proceed as I do, but I also include an additional control variable for whether the previous case was the initial case that announced the legal rule (see below).

[12]These scores follow the Giles, Hettinger and Peppers (2001) approach to measuring a circuit judge's policy preferences and are scored as follows. Judges for whom there were two home state senators of the president's party receive the average of these senator's common space scores (Poole 1998). Judges with one same-party home state senator receive that senator's score. Last, judges with no same-party home state senator receive the president's common space score. Scores for district court judges serving by designation were created following this same set of coding rules.

[13]My approach differs from Hansford and Spriggs' in three ways. First, they tap into the richness of Spaeth's U.S. Supreme Court Database to derive an issue-specific

Opinion Vitality. To capture variation in the authoritativeness of a previous opinion, I include *Previous Opinion Vitality*. The goal of the measure is to document the extent to which a previous opinion remains good law. Consistent with this, I use the aforementioned categories coded by *Shepard's*. In particular, I operationalize *Previous Opinion Vitality* as the number of times a previous opinion has been positively interpreted minus the number of times it has been negatively interpreted up through the year before the instant case was decided. An instant case decided in 1994, for example, will include treatments for all previous opinions up through (and including) 1993. This measure is dynamic in that it is updated each year, which facilitates capturing variation within a previous opinion as the law develops.

Policy and Vitality Interaction. Because the hypotheses predict that policy considerations will condition the role of vitality, I interact *Outcome Support*,

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measure of a justice's policy preferences that is ultimately based on the directionality (i.e., liberal or conservative) of the votes cast in previous cases. My measure of a judge's policy preferences, by contrast, is based on the revealed preferences of the legislators and presidents who appointed the judge and not the judge herself. This limitation is necessary as no direct measure of a circuit judge's policy preferences currently exists. I note, however, that one component of my ongoing research seeks to apply the same item response theory models used to study the policy preferences of Supreme Court justices (Martin and Quinn 2002) to estimate ideal points for circuit judges. This project, a collaborative effort with Ryan J. Owens, has recently received funding support from the National Science Foundation.

Second, whereas Hansford and Spriggs examine the policy distance between the median justice in an instant case and the median of the majority coalition in a previous opinion, I measure the distance between the two opinion's authors. This is the most common approach taken in research on the circuit courts (e.g., Hettinger, Lindquist and Martinek 2004). As a robustness check I also estimated the models reported below using a median distance measure. The substantive results are not appreciably affected and, as evidenced by a smaller value for the Bayesian Information Criterion (BIC), the opinion author measure appears to provide a better fit to the data.

Finally, their operationalization of policy difference is limited to the inclusion of the preference-based variable. To compensate for the coarseness of my measure, I take the additional step of including the outcome-based measure described above.

Author Ideological Distance, and *Previous Opinion Vitality*. Following best methodological practice for utilizing interactive terms, each pairwise combination as well as the individual constitutive terms are included, as well (Friedrich 1982; Brambor, Clark and Golder 2006; Kam and Franzese 2007). This approach allows for the possibility that an instant opinion will differentially treat a conservatively disposed opinion when it is authored by a conservative—as opposed to liberal—opinion author.[14]

Control Variables

Beyond my hypotheses of interest, characteristics of both the previous case and the instant case are likely to influence whether a particular previous case is interpreted. I code *Dissent in Previous Case* as 1 if there was a dissenting opinion written in a previous case; 0 otherwise. I expect that judges will be less likely to positively interpret and more likely to negatively interpret a decision with dissent. This stems from the fact that the dissent will provide a roadmap or justification against (and for) such action, respectively.

As my measure of vitality consists of a difference, it is necessary to control for the overall amount of activity surrounding a previous opinion. I include *Total Interpretations of Previous Opinion*, which is the sum of the number positive, negative, and neutral treatments a previous opinion has received up through the year before the instant opinion was decided.[15] As a previous opinion with a large

[14]Though I do not fully exploit such a potential here, this coding is consistent with the reasoning of Judge Patricia Wald of the D.C. Circuit, who notes that you might cite an ideological opponent with a higher likelihood than you do an ideological ally, "to demonstrate the universality of the principles [you] are advocating" (Wald 1995, 1400). (See also Calvert (1985) for a formalized account of the value of biased information.)

[15]I code neutral treatment as existing when an instant opinion explains or notes among conflicting authority a previous opinion.

amount of activity should be more likely to be treated in the future, I expect a positive relationship between this variable and the likelihood of both positive and negative interpretation.

Additionally, I also include *Number of Previous Opinions*, which indicates an instant opinion's place in the stream of progeny cases. As the number of progeny becomes large, the pool of potential cases to interpret will be large, as well. As a result, the odds that a particular opinion is interpreted will likely go down.

In a related vein, I also include a number of controls that tap into the salience of a previous case. Previous cases that are of higher salience should be more likely to be subsequently interpreted than their non-salient counterparts. Following the general tack proposed by Epstein and Segal (2000), I include *Previous Case Media Coverage*. This varaible takes on a value of 1 if the previous opinion received coverage in *U.S. Law Week*, which is a legal periodical that seeks to "[alert] the legal profession to the most important cases and why they are important" (LexisNexis Source Information). I code the variable as 0 otherwise. *Rule Announcing Case* is coded as 1 if the previous opinion in question was the initial case that announced a new legal rule. These opinions should be more notable and visible than others coming after it. As a final salience control I also include *Previous Case Amicus* and *Instant Case Amicus*, which is measured as the number of amicus curiae briefs filed in the previous and instant cases, respectively.[16]

I also include *Previous Case from Own Circuit*, which takes on a value of 1 if the previous opinion and instant opinion are from the same circuit and zero

[16]A recent line of research about the role of amicus curiae at the Supreme Court persuasively suggests that amicus participation is actually an indicator of a case's complexity and not salience (Collins 2008*a*,*b*). The mechanism for this argument lies in (1) the normalcy with which amici now participate and (2) their ability to provide external perspectives to the justices. I argue that amici participation at the circuit court level still taps into salience as participation is both exceedingly rare and generally limited to advocating for one side over the other (Collins and Martinek 2008).

otherwise. For both legal and collegial reasons, I predict that judges will be more likely to positively interpret and less likely to negatively interpret decisions coming from their own circuit.[17] Because a voluminous literature suggests some judges are more persuasive or influential than others (e.g., Lindquist and Klein 2006), I include *Previous Opinion Author Prestige*. This variable follows the general approach advocated by Klein and Morrisroe (1999) and is coded as the total number of times in the four years before the instant opinion was decided that the author of the previous opinion was cited *by name* in a circuit court opinion—including both majority and separate opinions—outside of his or her home circuit.[18] Previous opinions authored by judges with more named citations should be more likely to be positively interpreted and less likely to be negatively interpreted, all else equal.

Finally, the workload of the courts of appeals is immense. Circuit judges participate in thousands of cases each year and write many more opinions than their counterparts on the Supreme Court. All of this is done with a smaller number of law clerks, as well (Cohen 2002). Moreover, discovering previous decisions and then performing the research necessary to subsequently interpret them is likely to be time consuming. From this, I suggest two basic empirical consequences. First, recently decided cases are more likely to fly under a judge's radar and should be, as a result, less likely to be interpreted than older previous opinions (Songer 1988). Second, as the instant circuit's workload increases, the time spent by a judge and her staff on any particular opinion will decrease. This will deflate the likelihood that a previous case will be interpreted. Consistent with this, *Previous Case Age*

[17]Within a single circuit, a previous court decision is considered binding precedent. Opinions from other circuits are not, however (Cross 2007).

[18]Klein and Morrisroe (1999) argue that while an opinion author needs to cite previous decisions in an instant opinion, it is entirely within his or her discretion to cite the case name or include the name of the judge authoring the opinion. Excluding a judge's home circuit is necessary as collegiality norms within a circuit encourage named citations as a matter of course.

is the amount of time—measured in days—between when the previous and instant cases were decided. To capture a previous opinion's relative position in the order of available opinions, I also include *Previous Opinion Sequence*, which is coded as a previous case's position in the pool of extant opinions that are legally relevant. For a measure of a circuit's workload, I include *Instant Circuit Workload*, which is the total number of published opinions released by the circuit during the year that the instant case was decided.[19]

Methods and Results

Because the theory I am testing has different predictions for certain variables depending on positive as opposed to negative treatment, I follow Hansford and Spriggs (2006) and estimate a separate logistic regression model for positive and negative treatment. For each model, the dependent variable is coded as 1 if the instant opinion substantively treats each of the legally relevant previous opinions

[19]Operationalizing either *Previous Case Age* or *Instant Circuit Workload* as their natural logarithm does not affect the results described below.

and 0 otherwise.[20,21] Parameter estimates for these models are reported in Table 1. Model fit is fair. Both the positive and negative interpretation models predict over 85 percent of the observations correctly and reduce the number of prediction errors

[20]Importantly, I do *not* only use the citations within an instant opinion as my baseline. This would exclude a large number of potential previous cases that an instant opinion could have cited or interpreted but did not. This is to say, then, that I pool previous cases that are cited but not substantively interpreted with previous cases that are not cited at all. In addition to being consistent with Hansford and Spriggs' approach, I make this choice for both substantive and methodological reasons. Substantively, I am ultimately interested in understanding legal development, which, as I discuss above, occurs when judges substantively treat previous cases. Accordingly, previous opinions that are cited but not treated do not serve to further develop law. On the methodological front, treating non-cited and cited but not interpreted opinions as distinct would require estimating a Heckman-style selection model where, in the first (i.e., selection) stage, a judge decides to cite or not cite a previous opinion. In the second (i.e., outcome) stage, the same judge would decide whether, conditional on having cited a previous opinion, she would positively (or negatively) interpret it. Identification of this model hinges on having (at least) one variable that is correlated with the selection equation but uncorrelated with the outcome equation. As the conceptual overlap between citation and interpretation is nearly total, any excluded variable is likely to be a very weak instrument, which can lead to erroneous inferences (Brandt and Schneider 2007).

[21]I note that this is one of several potential modeling strategies for these type of data. I also considered (and ultimately rejected) treating my dependent variable as either ordinal or multinomial in nature. An ordinal approach is not desirable as it not clear how to handle the roughly six percent of previous opinions that are both positively and negatively interpreted by an instant opinion. If one treats them as missing data—surely a problematic approach—and estimates an ordinal logistic regression model, then there is strong evidence that said model violates the parallel regression assumption (Long and Freese 2006, 197-200).

The multinomial approach fares no better. While the question of how to treat previous opinions with both positive and negative treatment is easily resolved (i.e., simply add a separate category), there is strong theoretical reason to believe the assumption of the independence of irrelevant alternatives (IIA) is violated. (In making this statement I follow the advice of Long and Freese (2006, 243), who persuasively argue that common statistical tests used to assess IIA are flawed.) While the alternative-specific multinomial probit is theoretically feasible—and does not require IIA—the number of alternatives in my data (four or five depending on what gets pooled together) makes estimation computationally difficult. Furthermore, as a statistical matter, this model also requires at least one variable that is measured at the level of each alternative. In studying individual vote choice in elections with more than two outcomes (e.g., Alvarez and Nagler 1998; Quinn, Martin and Whit-

made as opposed to guessing the mode of the dependent variable (i.e., no interpretation).

	Interpretation Type	
	Positive	Negative
Outcome Support	1.328*	-0.846*
	(0.277)	(0.222)
Previous Opinion Vitality	0.008	0.014
	(0.079)	(0.058)
Author Ideological Distance	0.142	0.065
	(0.530)	(0.276)
Outcome Support x Author Distance	-0.520	-0.035
	(0.589)	(0.329)
Vitality x Author Distance	-0.024	-0.081
	(0.171)	(0.139)
Outcome Support x Vitality	-0.093	-0.124*
	(0.084)	(0.050)
Outcome Support x Vitality x Author Distance	0.120	0.197
	(0.188)	(0.151)
Dissent in Previous Case	0.059	0.265
	(0.253)	(0.154)
Total Interpretations of Previous Opinion	0.010	0.026*
	(0.010)	(0.008)
Number of Previous Opinions	-0.109*	-0.097*
	(0.035)	(0.034)
Previous Case From Own Circuit	0.380*	0.176
	(0.184)	(0.180)
Previous Case Media Coverage	0.046	0.066
	(0.145)	(0.142)
Rule Announcing Case	0.656*	0.103
	(0.126)	(0.137)
Previous Opinion Author Prestige	0.008*	0.008*
	(0.003)	(0.003)
Previous Case Amicus	0.107*	0.093*
	(0.039)	(0.024)
Instant Case Amicus	-0.051*	0.057*
	(0.012)	(0.027)
Instant Circuit Workload	0.000	-0.000
	(0.000)	(0.000)

ford 1999), this variable is generally the ideological distance between a voter and each candidate. Unfortunately, no such analogue appears to exist for the various outcomes analyzed here.

	Interpretation Type	
	Positive	Negative
Previous Opinion Age	0.000	0.000
	(0.000)	(0.000)
Previous Opinion Sequence	0.125*	0.036
	(0.044)	(0.055)
Constant	-2.623*	-0.875*
	(0.282)	(0.210)
Observations	1048	1048
Pseudo R2	0.192	0.166
Percent Correctly Predicted	85.5	88.5
Percent Reduction in Error	3.8	5.2

Table 1: Logistic regression model parameter estimates for positive (left column) and negative (right column) interpretation of a previous circuit decision by an instant circuit court opinion. Robust standard errors clustered on the unique issue-rule combination are reported in parentheses below the maximum likelihood estiamtes. * denotes $p < 0.05$ (two-tailed test).

Many of the control variables perform as expected.[22] In the positive interpretation model, I find that judges are more likely to positively interpret a previous opinion when it is: from their home circuit, the initial rule-announcing opinion in a string of progeny, and was written by a judge who has higher prestige. I also find that judges are less likely to positively interpret a previous opinion when the instant case has a higher level of amicus participation.

In the context of negative interpretation, previous opinions that have been frequently interpreted in the past (whether positive, negative, or neutral) are more likely to be negatively interpreted in the future. Interestingly, while I find that prestige predicts positive interpretation, my results also suggest it predicts negative

[22]Additional analysis does not suggest that either positive or negative treatment is driven by a particular issue area. In a chi-square test, I fail to reject the null hypothesis of independence between issue area and the relative occurence of both positive and negative treatment ($p = 0.21$ and $p = 0.70$, respectively). I also reestimated both models including dummy variables for each issue area; all results remain the same under this alternative model specification.

interpretation, as well. The converse to the positive model's amicus finding holds true in the negative model; increased activity in an instant case is associated with a heightened likelihood of negative interpretation.

Turning to the six hypotheses of interest, it is important to note that, as they involve interactive terms, the parameter estimates from Table 1 are of little use in interpreting either the substantive *or* statistical significance of the independent variables (Brambor, Clark and Golder 2006; Kam and Franzese 2007; King, Tomz and Wittenberg 2000). Accordingly, I turn to stochastic simulations to further explicate the nature of my results. For these simulations, all other variables are held at either their mean or modal values, as appropriate.

Consider first the three hypotheses for the positive interpretation of a previous court opinion. Figure 3 shows the effect of *Author Ideological Distance* (x-axis) and *Previous Opinion Vitality* (y-axis) in previous cases whose ideological disposition supports an instant case's outcome (i.e., *Outcome Support* equals 1). Probability of citation is displayed by the varying color contours on the plot, with darker colors corresponding to higher probabilities and lighter colors corresponding to lower probabilities. To aid interpretation and discussion I have annotated the plot with four letters: A, B, C, and D.

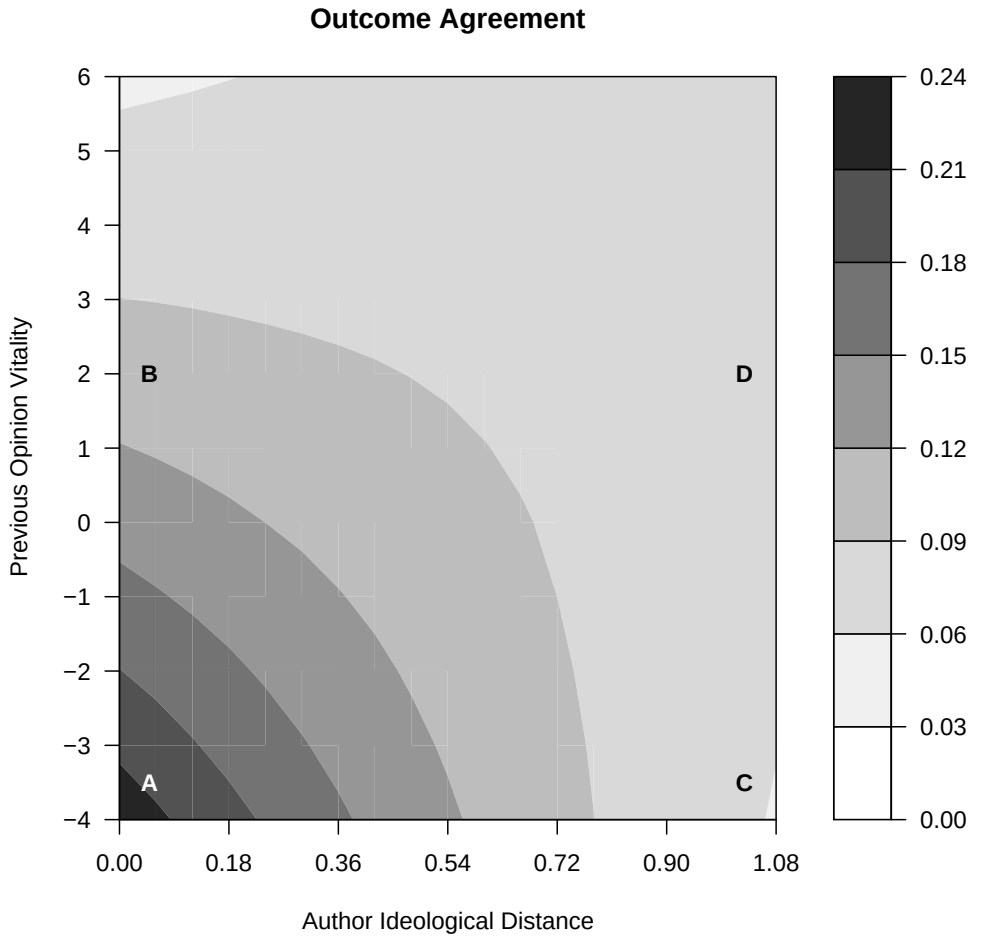

Figure 3: Predicted probability that an instant opinion positively interprets a previous court opinion when there is agreement between the two cases' outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability is displayed by the grayscale gradient on the plot, with darker shades indicating high probability and lighter shades indicating lower probability. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate. A, B, C, and D note hypotheticals discussed in the text.

Positive Hypothesis 1 suggests that ideological distance would be inversely related with a judge's propensity to positively interpret a previous opinion. In this vein, compare points A and C. Point A represents a previous opinion whose distance is at the minimum whereas point C is an opinion with maximal ideological distance

between two authors. As the shading indicates, point A is associated with a higher likelihood of positive interpretation than is point C, which is consistent with the hypothesis.[23]

In a related vein, Positive Hypothesis 2 predicts that the negative effect of hypothesis 1 would decrease as the vitality of a previous opinion increased. In other words, while a judge stands to reap significant policy benefits from resuscitating a weak opinion with which she agrees, the same judge has little to gain when that previous opinion is already viewed as being good law. My results are supportive of this conjecture. Points B and D retain the ideological distance values of points A and C, but are higher in their values of vitality.[24] While point B is still larger than point D (0.80 probability), the magnitude of the B-D difference is roughly one-fifth

[23]While contour plots provide an easy way to understand how two continuous or near continuous variables condition a third variable such as the probability of an event occurring, a key limitation is their inability to display uncertainty around these point estimates. Fortunately, such elements are readily recoverable from the same simulations that generated these point estimates.

The probability that point A is larger than point C is 0.97. To make this statement—and others like it below—I took 25,000 draws from a multivariate normal distribution whose means consisted of the parameter estimates of β reported from the appropriate column in Table 1. The covariance matrix for the distribution came from the variance-covariance matrix underlying the same model. I then computed two quantities of interest: Pr(Cite | A) and Pr(Cite | C), which correspond to the probability of citation given the hypothetical values for point A and point C, respectively. Each of these calculations was performed for each draw taken from the multivariate distribution (i.e., 25,000 times each). I then examined the difference between A and B, which also yielded 25,000 values. The 0.97 value implies that in 97 percent of these 25,000 comparisons (i.e., roughly 24,250), the value of A was larger than the value for C.

[24]The values of +2 (points B and D) and -4 (points A and C) correspond to the 90th and 2nd percentile, respectively. The mean for the variable is almost exactly +1 with a standard deviation of roughly 3. The minimum and maximum for vitality are -11 and +23, respectively.

the size of the A-C difference.[25]

The results also provide weak support for Positive Hypothesis 3, which predicts that among ideologically distant previous cases, an increase in vitality would increase the likelihood of positive interpretation. Point C, a previous opinion of high distance and low vitality, has a 0.06 predicted probability of being positively interpreted. Though point D is only marginally larger—the predicted value is 0.07—when vitality is especially high (i.e., +6 in Figure 3), the predicted probability of positive interpretation increases by 33 percent of its baseline value to 0.08.[26]

In short, Figure 3 provides support for all three hypotheses of Hansford and Spriggs' theory of legal development.[27] It is important to note, however, that Figure 3 focuses exclusively on previous opinions whose ideological disposition supports the outcome to be reached by a judge in the instant case at hand (roughly 70 percent of the observations in the data). Interestingly, when the disposition is *opposed* to the instant outcome, two things happen. First, the predicted probabilities plummet in absolute value. Whereas the probabilities in Figure 3 take on values as high as 0.24, the largest probability when *Outcome Support* equals 0 is an anemic 0.01.[28] Second, while Figure 3, as evidenced by the various shades on the plot, shows a con-

[25]The median differences for B-D and A-C are 0.03 and 0.17, respectively. Using the same general procedure outline in footnote 23, I can examine the distribution of the difference between the A-C and B-D differences. In so doing, I find that the probability that the A-C difference is larger than the B-D difference is 0.96.

[26]The probability that either point D or the +6 vitality value is larger than point C is 0.66.

[27]As a I note above (see footnote 3), Hansford and Spriggs' theory is agnostic as to the effect of vitality when ideological distance is low. As point A is higher than point B—with a 0.99 probability—my findings suggest that, in the circuit court context, judges weigh policy more heavily than vitality. This stands in contrast with their findings, which suggest that legitimacy concerns trump policy-based ones (Hansford and Spriggs 2006, 102-103).

[28]It is not the case that these differences are driven by outlier values. The average probability with policy agreement is 0.10. The average for outcome disagreement is only 0.01.

siderable amount of variation, the associated probabilities without this specific type of policy agreement are almost constant.[29] In short, outcome agreement between a previous opinion and the instant one strongly conditions the interactive—and individual—effect of vitality and ideological distance.

The results for the negative model of interpretation provide mixed supportive for the three related hypotheses. Figure 4 presents the negative analogue to Figure 3. Starting with points B and D, my results suggest that judges are more likely to negatively interpret a previous decision when ideological distance is high (point D) as opposed to low (point B).[30] This is consistent, of course, with Negative Hypothesis 1. As the baseline value of vitality decreases, however, the magnitude of the ideological distance effect, consistent with Negative Hypothesis 2, decreases. Indeed, for previous opinions whose vitality is between 0 and -1, the gradient across ideological distance does not vary, which suggests there is no effect at this value. Interestingly, as vitality becomes more negative (i.e., the previous opinion is likely viewed as being "bad law"), the direction of the ideological distance effect actually reverses. In other words, a judge is, according to these results, *more* likely to negatively interpret an opinion that is ideologically proximate (point A) than one that is distant (point C) when its vitality is very low (the probability that point A is higher than point C is 0.84). As point B is larger than point A (0.99 probability), I also find support for Negative Hypothesis 3.

[29]Consider, for example, that both the standard deviation and interquartile range for the point estimates in Figure 3 are 0.03. When *Outcome Support* equals 0, however, both quantities are only 0.001.

[30]The probability that point D is larger than point B is 0.94.

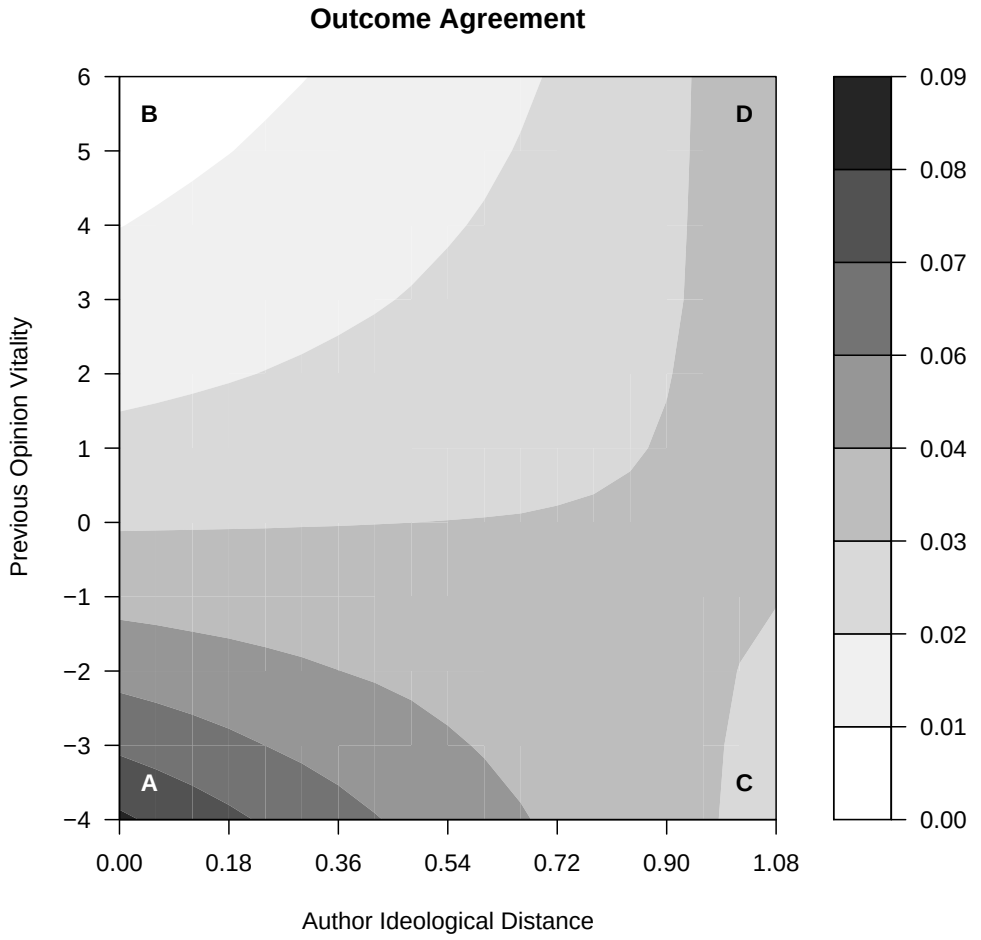

Figure 4: Predicted probability that an instant opinion negatively interprets a previous court opinion when there is agreement between the two cases' outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability is displayed by the grayscale gradient on the plot, with darker shades indicating high probability and lighter shades indicating lower probability. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate. A, B, C, and D note hypotheticals discussed in the text.

Unlike the positive interpretation model, interesting variation remains when the previous decision is not ideologically congruent with the outcome in the instant case. Indeed, as Figure 5 demonstrates, when there is outcome disagreement between a previous and instant opinion, the results provide some evidence to support the

opposite of the three negative hypotheses.[31] Contrary to Negative Hypotheses 1 and 2, (a) an increase in ideological distance can actually *decrease* the likelihood of negative interpretation (consider points B and D), and (b) a decrease in vitality first weakens and then reverses the direction of this effect (consider points A and C). These results suggest that a circuit judge is ultimately most likely to negatively interpret a previous opinion when it is both written by an ideologically distant judge and already viewed as being "bad law." As there is limited evidence to suggest that point B is (slightly) larger than point A (see footnote 31), Negative Hypothesis 3 is also contradicted.[32]

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[31]It is worth noting that the probability magnitudes (see footnote 23) associated with the ordinal differences in Figure 5 are not as strong as those presented in previous figures. They are as follows: A-C (0.74), A-B, (0.60), C-D (0.75), and B-D (0.68).

[32]As a I note above (see footnote 3), Hansford and Spriggs' theory is agnostic as to the effect of vitality when ideological distance is large. As the truest test of this would be an ideologically distant opinion that disagrees with the instant disposition, I focus on the results portrayed in Figure 5. Here, point C is higher than point D (0.75 probability). Accordingly, I conclude that the relative weight of vitality trumps policy considerations. This, much like the analogous quantity for positive interpretation (see footnote 27), stands in contrast with Hansford and Spriggs' findings, which suggest that policy concerns trump legitimacy-based ones (2006, 104-105).

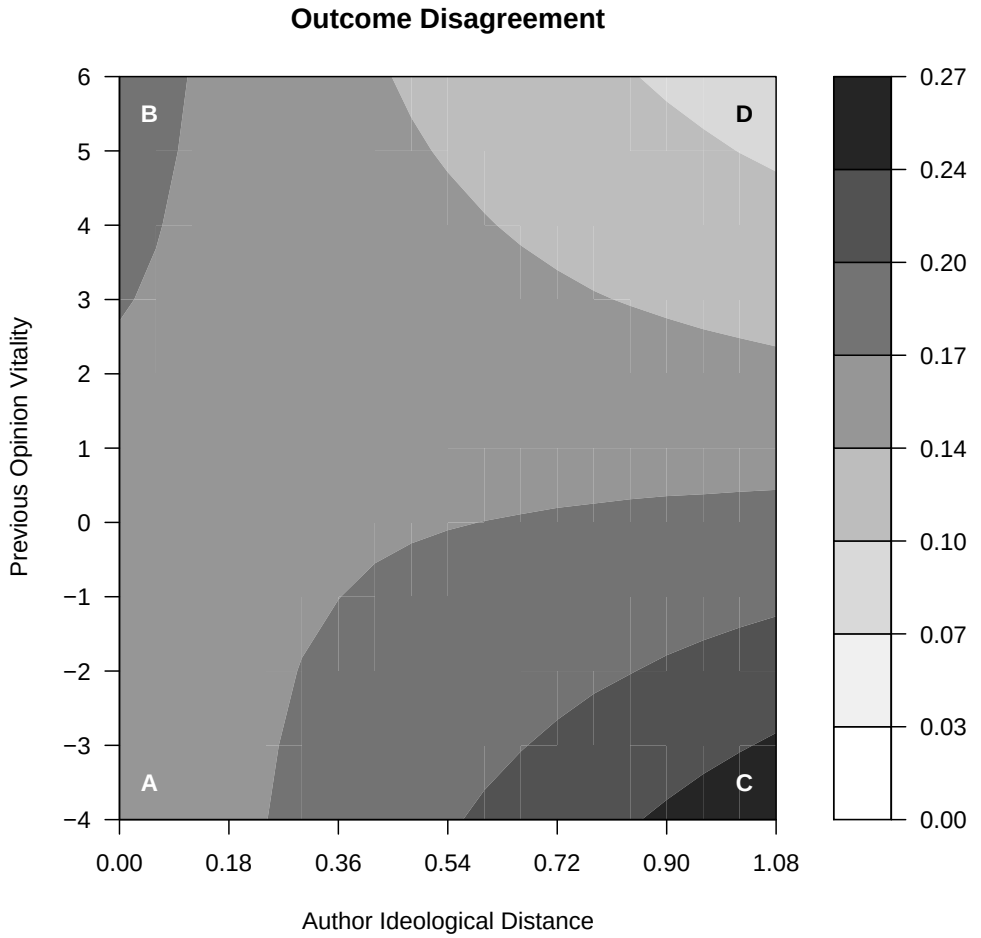

Figure 5: Predicted probability that an instant opinion negatively interprets a previous court opinion when there is disagreement between the two cases' outcomes, conditional on author ideological distance (x-axis) and previous opinion vitality (y-axis). Probability is displayed by the grayscale gradient on the plot, with darker shades indicating high probability and lighter shades indicating lower probability. Probabilities come from stochastic simulations similar to Clarify, where all other variables were set at their mean or modal values, as approrpriate. A, B, C, and D note hypotheticals discussed in the text.

Discussion

The primary purpose of this paper is to provide an initial view of legal development on the U.S. Courts of Appeals. Such a perspective is important for

substantive reasons, as the circuit courts are the appellate workhorse in the federal judiciary, and theoretical reasons, as existing scholarship predominantly examines case dispositions instead of the opinions themselves. My theoretical lens suggests circuit judges must weigh both policy and legal considerations when deciding how to interpret previous opinions. In empirically testing the hypotheses generated from the theory, my findings make several contributions while also illuminating avenues for future research.

Though the theory was developed with the Supreme Court in mind, my test of it in the circuit court context was quite successful. In the context of positively interpreting or expanding the scope of previous opinions, the data suggest that the behavior of circuit judges is entirely consistent with a judge whose pursuit of policy can be tempered by the authoritativeness of the previous opinions she is interpreting.

At the same time, however, my results from the model of negative interpretation suggest such behavior exists only when a previous opinion's disposition agrees with the outcome a judge seeks to reach in an instant case. In other words, when a judge is confronted by a previous decision that she cannot use to support her desired outcome, the effect of both ideological distance and vitality changes dramatically. As this result is not driven by any sort of institutional difference between the Supreme Court and the circuit courts, it suggests that further refinement (and retesting) of Hansford and Spriggs' theory might yield additional insights into how the Court interprets and develops law.

Moreover, the data and results in this paper suggest that the circuit court judges can, in certain circumstances, behave similarly to their Supreme Court counterparts. Importantly, the cases used in this analysis place the circuit judge in a position where the potential hierarchical influence of the Supreme Court is minimal or nonexistent. While this approach is useful in the context of arriving at a properly specified statistical model, it is limited to the extent that researchers—myself

included—are keenly interested in understanding how circuit court judges respond to the Court's precedents.

Future efforts at studying legal development in the circuit courts should examine cases where judges have the opportunity to substantively interpret both the decisions of peer courts as well as the binding precedents of the Supreme Court. Doing so, of course, will require substantial theoretical and empirical effort. As currently formulated, Hansford and Spriggs' model, which provides significant theoretical leverage in the present study, lacks a parameter for the "cost" that would presumably be associated with a circuit judge's deviation from the Court's precedent. As noted earlier, however, because the Court's discretionary docket is so small, the impact of such a cost would be conditional on a judge's ex ante belief that her decision would be reviewed. Because the Court's agenda setting decisions are driven, in part, by policy considerations (Caldeira, Wright and Zorn 1999; Black and Owens 2009), this belief itself is a function of the level of policy congruence between the circuit judge and the Supreme Court.

There is significant heavy lifting on the empirical and measurement front, as well. The estimates of a circuit judge's general policy preferences are, as I have discussed above (see footnote 13), quite coarse and leave much to be desired. While *Shepard's* assessment of substantive treatment is reliable, Westlaw's KeyCite citator offers a promising alternative or supplement to the information provide by *Shepard's*. In particular, KeyCite, in addition to providing "directional" information (i.e., positive or negative treatment), also indicates the depth of the treatment. Treatment can be as short as appearing in string citation or as long as a sustained discussion spanning across more than a page of a printed opinion. In short, while the results presented here make an important initial contribution to our collective understanding of how the circuit courts operate, they are only the first steps and much additional work remains to be done.

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Conclusion

The essays in this dissertation make an important contribution to scholarly understanding of how legal factors influence both the U.S. Supreme Court as well as the U.S. Courts of Appeals. In the context of the U.S. Supreme Court's agenda-setting process, I find that both policy and legal considerations influence the votes cast by the justices. What is more, legal considerations such as the presence of conflict can dissuade justices from casting a forward-looking vote based on their policy preferences. At the same time, however, when law and policy point in the same direction, justices are all the more likely to vote in the manner prescribed by these factors.

In the circuit court context, my second and third essays provide an important initial view of how judges craft legal policy and potential limitations scholars must navigate in studying the circuit courts. Beyond these results, I believe these essays also open the door to pursuing several productive lines of future research. For example, the data utilized for Essay 2 and Essay 3 focus on three broad issue areas and are, by design, limited in what they can say about how the circuit courts interact in a multilevel judicial hierarchy. Future efforts must theorize about how their unique position alters the decision making of circuit judges and deploy the appropriate data to test the resulting hypotheses.

There are, of course, myriad related topics that are worthy of future study. For example, in recent years a large—and growing—body of legal scholarship seeks to address the normative implications of whether U.S. judges, in disposing of cases through written opinions, should mention, discuss, cite to, or otherwise reference materials originating from jurisdictions outside of the U.S. (i.e., "foreign materials"). Despite the volume of writing on the topic, to date the debate has been conducted almost entirely without the benefit of empirical analyses used to suss out the validity of the arguments being made. A useful contribution to this topic would be to provide a theoretically-motivated account of why justices might seek to bolster their opinions

with foreign materials. Such an account could then be paired and tested with data from the Court's opinions on the usage of foreign materials. Beyond answering a substantively valuable question, the proposed study would also advance scholarly understanding of how the Court crafts its written opinions, which is an important topic that has received relatively limited treatment.