

Bias in Judicial Citations: A Window into the Behavior of Judges?

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ABSTRACT

This article tests for the presence of bias in judicial citations within federal circuit court opinions. Our findings suggest bias along three dimensions. First, judges base outside-circuit citation decisions in part on the political party of the cited judge. Judges tend to cite judges of the opposite political party less often than would be expected considering the fraction of the total pool of opinions attributable to judges of the opposite political party. Second, judges are more likely to engage in biased citation practices in certain high-stakes situations. These high-stakes situations include opinions dealing with certain subject matters (such as individual rights and campaign finance) as well as opinions in which another judge is in active opposition. Third, judges more often cite those judges who cite them frequently, which suggests the presence of mutual citation clubs.

1. INTRODUCTION

The past 2 decades have witnessed an explosion in articles ranking judges and courts in terms of their influence and quality (Caldeira 1983; Posner 1990; Kosma 1998; Landes, Lessig, and Solimine 1998; Cross and Lindquist 2006). In their rankings, scholars have looked to a variety of measures, including aggregate citations by other judges, citations by other

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judges accompanied by an invocation of the judge's name, and citations by academics (Landes, Lessig, and Solimine 1998; Klein and Morrisroe 1999; Bhattacharya and Smyth 2001; Choi and Gulati 2004).

Naysayers assert that these citation counts cannot measure matters such as judicial quality and judgment (Gordon 1992; Goldberg 2005). Among the measurement problems critics have flagged are the biases that might affect these counts (Marshall 2004; Workshop on Empirical Research in the Law 2004). For example, to the extent citation counts confer some kind of status, judges may make citation choices on the basis of friendship or reciprocity (that is, if you cite me, I'll cite you) (Klein and Morrisroe 1999). Or there may be citation biases in terms of race, gender, educational background, and politics. Male judges may cite other male judges more often than they cite female judges; Yale graduates may cite other Yale graduates more; Republican judges may cite other Republican judges more. The presence of these biases would bring into question the validity of using citation counts as a measure of judicial quality or reputation.

The empirical literature has examined the relationship between various types of biases affecting votes or case outcomes. Two decades of research suggest that judges display ideological biases in their voting patterns (Brudney, Schiavoni, and Merritt 1999; Sunstein, Schkade, and Ellman 2004). Judges tend to vote in a manner consistent with the platform of the party that appointed them. Although the focus of this research has been the U.S. Supreme Court, there is evidence of ideological voting patterns at the federal appellate level as well (Songer and Davis 1990; Songer and Haire 1992; Sunstein, Schkade, and Ellman 2004).

Scholars have also found that bias is either exacerbated or dampened in certain categories of cases. Greater bias has been detected in hot-button areas such as civil rights and liberties (Sunstein, Schkade, and Ellman 2004). Conversely, minimal bias, if any, has been found in areas such as tax and securities (Schneider 2001, 2005; Grundfest and Pritchard 2002). Perhaps judges find disputes in certain areas mundane and do not have strong political preferences regarding the issues (Sullivan and Thompson 2004; Staudt, Epstein, and Wiedenbeck 2006). Note, however, that the research on the lack of bias in the so-called mundane areas has been minimal (Staudt Epstein, and Wiedenbeck 2006).

Scholars also find evidence of judges behaving strategically, reacting to or anticipating the decisions of other judges on the same court, judges on other courts, the legislative branch, and the executive branch (Revesz 1997; Epstein and Knight 2000). Evidence suggests that, at least in cer-

tain subject areas, judges on multimember panels vote differently when they are on panels that contain only members of the same political persuasion than when they are on panels of mixed political persuasion (Revesz 1997; Sunstein, Schkade, and Ellman 2004; Sunstein and Miles 2006). Evidence also suggests that conflicts both within and among courts—such as the reversal of lower court rulings and the writing of dissenting opinions—tend to be a function of ideological differences among the judges (Hettinger, Lindquist, and Martinek 2006).

In contrast to the data on voting, the data on citation practices have not been mined extensively for the presence of bias. Most studies looking at citations focus on the aggregate numbers of citations a judge receives and do not look on a case-by-case basis at how a judge decides when to cite another opinion. Scholars measuring judicial influence, for example, have used the aggregate outside-circuit citations received as a measure of the influence of federal circuit court judges (Landes, Lessig, and Solimine 1998). Others have counted the invocations of a specific judge's name in judicial opinions as a measure of that judge's prestige (Klein and Morrisroe 1999).¹ Moreover, the Landes, Lessig, and Solimine and Klein and Morrisroe studies sought to measure judicial influence and prestige; analyzing bias was a side issue. Landes, Lessig, and Solimine examine political affiliation as part of an examination of a panoply of biographical variables (including demographic statistics, law school, academic honors, work experience, and others) and their relationship to measures of influence. Klein and Morrisroe provide a univariate test of the correlation between ideology and prestige. Neither study finds meaningful bias. In their two studies of prestige on the Australian courts, Bhattacharya and Smyth (2001; Smyth and Bhattacharya 2003) find some indication of political-party-driven bias in the citation practices of the High Court but none in the federal courts (which are one level below the High Court). They speculate, in the context of their High Court study, that the unorthodox writing methods of some of the Labour Party

1. Invocations are citations in which the author of the opinion is mentioned by name. Judges are not normally mentioned by name when cited. Invocations are a sign of special respect to the judge whose opinion is being cited. In this context, note that comparison of the results from an invocation study to that of a broader citation study is imperfect. It may be that invocations are less susceptible to citation biases because invocations tend to occur only for a handful of judicial superstars. It is possible that the status of these superstars—for example, Learned Hand, Henry Friendly, and Richard Posner—is such that they are invoked evenly by those on both ends of the political spectrum.

judges may have resulted in conservative judges shunning those opinions (Bhattacharya and Smyth 2001).

Our study provides an opinion-level examination of the outside citation practices of federal appellate court judges from January 1, 1998, to December 31, 1999, as a means of assessing bias in judicial reasoning. There are but a handful of other studies on ideological biases in citation practices at an opinion level (Johnson 1986; Abramowicz and Tiller 2005). Johnson looks at the Supreme Court citations to the Court's own past opinions and reports that ideology does not drive the citation patterns. Because, at least in theory, the Supreme Court follows its own precedent, citations to past cases should largely be driven by precedent. Political bias may become obscured by the importance of precedent in Johnson's study. Abramowicz and Tiller look at the presence of political partisanship in citations to legislative history within judicial opinions.² They report that the tendency to cite Republican-generated legislative history is greater when the deciding panel of federal circuit court judges is composed primarily of Republican-appointed judges. Abramowicz and Tiller, however, do not divide their opinions on the basis of the underlying subject matter. As we discuss below, the tendency to cite on the basis of ideology varies by subject matter. Looking at citations to legislative history also may understate the presence of bias. Because judges typically will cite legislative history when interpreting a statute, the range of possible history to cite is limited (to the history of the particular statute). Bias may appear, but only in limited form. In comparison, federal judges citing outside-circuit opinions (which lack precedential value) do so absent such constraints. In looking at citation patterns within opinions, neither Johnson nor Abramowicz and Tiller control for the pool of opinions (or legislative history) that their sample judges may cite. It may be that a judge cites predominantly Republican-authored

2. Relatedly, Sisk, Heise, and Morriss (1998) examine judicial reasoning patterns for a set of federal opinions on a single uniform issue: the constitutionality of the Sentencing Reform Act and the Sentencing Guidelines. They look at the constitutional outcome for these decisions as well as the reasoning used. To determine judicial reasoning, they read each opinion and coded the opinion (on the basis of their subjective reading) for the use of particular types of constitutional theory and reasoning approaches. They report no significant difference between Republican- and Democrat-appointed judges for opinion outcomes on the constitutionality issue. They nonetheless report differences in the reasoning used in the opinions, although in a different direction from what they had predicted. Despite the advocacy of the Reagan administration for an "original intent" constitutional theory, Republican-appointed judges were less likely than Democrat appointees to employ originalist reasoning.

past opinions (or legislative history) not because of bias but simply because the pool of available opinions is predominantly composed of such opinions.

In our study we find that the political party of a judge is correlated with the willingness of a judge to make outside-circuit citations. Judges are less likely to cite judges of the opposite political party than they are to cite judges of their own party. Moreover, the tendency not to cite opposite-party judges is greater in high-stakes circumstances. For certain subject matter areas (including cases involving race discrimination, sex discrimination, age discrimination, privacy rights, affirmative action, abortion, and other hot-button issues), judges are more likely to cite judges of the same political party. Similarly, we examine opinions in active opposition to another opinion in the same case (for example, a dissent written against a majority opinion or a majority opinion for which a dissent is present). In such “opposition” opinions, judges are again more likely to cite judges of the same political party. Finally, we report that judges tend to cite other judges who cite them frequently.

Section 2 sets forth hypotheses on bias in citation practices. Section 3 describes our data set. Section 4 presents empirical findings.

2. HYPOTHESES ON JUDICIAL BIAS

Broadly speaking, judges cite opinions either for their precedential value or, to the extent the opinion is not precedential, for their reasoning. It is the second rationale that is relevant to our analysis because we restrict our data set to outside-circuit citations. Judges are not required to cite opinions from other circuits as a matter of precedent but may do so for their persuasive value. The reasoning in the cited case may serve as a building block for the argument the judge is making or demonstrate that other judges (especially prominent judges) have reasoned in a similar fashion. The key is that judges exercise discretion in choosing their outside-circuit cites. Those choices reveal information about judicial preferences.

Why look at bias in citations when existing studies already demonstrate that bias exists in how judges vote in judicial decisions? Citation studies can complement and extend investigations of political bias in judicial voting. Judges do more than vote. Judges also offer reasoning for their decisions, and that reasoning is integrated into the body of precedent that in turn influences the outcomes of subsequent cases. While

a particular judge's vote affects the outcome for the particular facts of any given case, the reasoning of the case has the potential to influence cases involving a range of disparate fact patterns. Given the integral role citations play in the construction of legal arguments, examining citation patterns furnishes a method of analyzing bias in judicial reasoning.

To see the relevance of studying citation practices among judges, we adopt a constrained attitudinal model of judging. The attitudinal model of judging is harsh in its simple form (Segal and Spaeth 2002). The votes of judges are driven primarily by ideology. We posit that under the attitudinal model, a judge's ideological preferences also affect the choice of citations in her legal opinions. If they could, we assume judges would prefer to cite only those opinions that advance their own ideology; alternatively, such politically motivated judges would cite only judges with similar ideologies, either to signal their own political stripes or to burnish the reputation of ideological fellow travelers.

What constraints stop a judge from citing only opinions that align precisely with her given ideology under the attitudinal model? We posit that judges are subject to at least two constraints. First, judges desire to minimize their chances of reversal by a higher court, either an en banc panel of the same circuit or the Supreme Court. Reversal eliminates the lasting impact of the judge's opinion (and the ability of the judge to change the underlying substantive law through the opinion). Reversal also harms a judge's reputation. Better-written opinions (with greater legal support) are less likely than inferior ones to get reversed. A judge could write an opinion relying solely on inside-circuit citations and precedent. However, cases that reach the federal circuit courts and result in published opinions often contain novel issues for which inside-circuit precedent provides no definitive answer. Citing authority from outside-circuit judges bolsters the authority of the authoring judge's arguments (Walsh 1997). Citing a broad representation of outside-circuit authority provides evidence that the position is accepted from all ideological viewpoints and helps lead to a lower likelihood of reversal.

Second, judges are constrained by their desire to foster a particular reputation among other judges, politicians, and the public in general. A reputation for nonpartisanship, wisdom, and intelligence is better than the opposite, particularly for judges who desire promotion to the Supreme Court. In addition to reversals, highly political opinions supported with citations solely to judges aligned with the same political viewpoint may give a judge a partisan reputation. In contrast, one way to produce an impression of evenhandedness is to cite elite judges of the opposite

political persuasion; such citations are more likely to be noticed and give the citing judge greater credibility. Of course, some judges may wish to foster a reputation for partisanship to attract the attention of political ideologues within the executive branch in an attempt to enhance their chances of nomination to the Supreme Court. Confirmation within the Senate, nonetheless, will require broader-based support. In the context of the Samuel Alito confirmation hearings, newspapers reported extensively on the substance of the reasoning in Alito's opinions, exposing Alito's legal views to the scrutiny of the general public (Toner and Liptak 2005; Kirkpatrick 2005; Labaton 2005).

The combination of these constraints predicts that there will be discernible patterns in citations even within an attitudinal model of citation practices. Because of the constraints, many outside citations to other judges will occur irrespective of particular political ideologies. At the margin, nonetheless, incentives exist for biased citation practices. Biased citations help signal the judges' ideological credentials. To the extent that outside observers rank judges on the basis of citation counts, citing fellow ideological judges also helps enhance the reputation of these judges (who may return the favor by citing back). Judges who desire to shift the law toward their own ideological views may cite opinions of other judges that contain arguments that are consistent with and support the citing judges' own analysis.

Examination of citation practices, compared with judicial voting studies, allows us to investigate nuances in how political biases play out in judging in a more fine-tuned manner. Vote decisions are all or nothing in the sense that a circuit court judge must decide whether to reverse or affirm an issue up on appeal. Citations, however, are more continuous, allowing for a more exact assessment of how biased judges are in particular subject matter areas. Two judges may vote for the same outcome in a particular given fact pattern. One judge, however, may cite equally judges of both parties in her opinion; the other judge, if given the same opinion to write, may cite predominantly judges of her own political party. The difference in citation patterns gives us an objective method of assessing the political bias involved in a judge's legal reasoning.

The relationship between citations and judicial voting, as well, is not necessarily linear. Some judges care more about the lasting impact of their reasoning and the precedent of their analysis than the voting outcome in any particular case. Such judges may, for example, choose to vote one way but employ reasoning supported with citations that tilt future precedent another way. For example, a judge could vote to uphold

an insider-trading conviction, employing an opinion that radically reduces the ability of insiders to engage in any trades of the insiders' company securities. Alternatively, the judge could vote to uphold the same insider-trading conviction and employ reasoning that points out the uniqueness of the defendant's circumstances and opens up the scope of trading for insiders in other more general circumstances. Even with identical voting outcomes, the impact of the two opinions will differ.

Given the complexities involved in the incentives of judges to employ outside-circuit citations, our study is but an initial step to mine the insights available from examining opinion-level citation data. To focus on the influence of politics on the decision to cite other judges, we need a proxy for the politics of specific judges. We use the political party of the president who nominated a judge as a proxy for the judge's politics (Revesz 1997; Pinello 1999; Sunstein, Schkade, and Ellman 2004). We examine three specific hypotheses as set forth below.

Hypothesis 1: Party Bias Hypothesis. When citing outside-circuit opinions, judges are more likely to cite opinions authored by judges of their own political party affiliation than judges of the opposite party affiliation.

Hypothesis 1 addresses the prospect that political bias affects citation patterns. If judges put forth opinions that are skewed toward their own political leanings, they will likely cite opinions written by judges with a similar political persuasion in support. Conversely, such judges will tend not to cite judges of the opposite political party.

Bias in citations undermines the accuracy of judicial rankings based on aggregate citation counts. Evidence in support of the party bias hypothesis calls into question the value of ranking judges on the basis of citations. Rankings based on aggregate citation counts implicitly assume that citations reflect some broad-based notion of judicial quality. Rankings make sense if we assume, for example, that one judge cites another judge for the quality, wisdom, and articulateness of the cited judge's reasoning. In contrast, if a judge cites another judge simply because they are members of the same political party, it becomes more difficult to justify the use of aggregate citation counts to rank judicial quality (at least on broad notions of quality).

Studies based on citation counts aside, is there a problem if judges display ideology in their judicial reasoning? Some judges may cite the same group of judges because they value the particular judicial philosophy of the group. It is the rare judge who does not hold a particular

jurisprudence in how to decide court decisions. Nonetheless, providing transparency on the precise type of ideology that drives judges is important. We assert that judges, when deciding cases, would rather appear as if their decisions were decided using widely held rather than narrowly held ideologies. Appealing to widely held ideologies casts the judge in a favorable light among other judges and the public in general. Few judges would like to appear as lacking in impartiality, a widely held goal of judging, before their peers and the public. As a result, judges may in fact make decisions on the basis of one type of narrowly held ideology or political leaning but nonetheless not want to advertise to the world that they hold this bias. Deciding a case on the basis of judicial restraint is one thing. Referring to judicial restraint while simply deciding on the basis of more narrowly held political beliefs, such as one's personal views about abortion, is another thing. Studying the extent to which a judge associates systematically (through citation practices) with particular subsets of judges having similar political persuasions may help reveal the extent to which otherwise hidden political bias affects decision making.

Hypothesis 2: High-Stakes Hypothesis. The tendency to cite judges of the same political party is greater for some (higher stakes) subject matters than for others. The tendency is also greater for opinions in which a judge is in active opposition to other judges.

Here we posit that the willingness to rely on (or be persuaded by) a different viewpoint is broader in certain cases and narrower in others. In mundane areas that most judges do not care about much—perhaps tax or bankruptcy—judges may be willing to trust the analyses of a broad array of colleagues, regardless of political affiliation. In cases involving politically hot issues, however, not only may judges be suspicious of the analyses of other judges whose preferences are likely different, but also their own views may be strong and fixed.³ Our prediction is that judges are more likely to cite judges of the same party in cases involving high-stakes subjects than in those involving mundane subjects.

Cognitive limitations may affect a judge's pattern of citations. Judges are resource constrained and do not have the time to analyze every issue from first principles. One shortcut for them is to rely on the analyses of

3. Along these lines, Wahlbeck and Maltzman (1996) posit that justices are less likely to switch votes between the conference and the final vote on the merits in salient cases than in average cases. This is true, they argue, because the justices' positions will be relatively fixed, and the likelihood that new information will alter a justice's opinion is relatively low.

other judges in similar cases. To the extent that there are other judges whose ideologies and analytics they trust, judges are likely to rely on and cite the analyses of those other judges. Such citation biases will be more pronounced in areas where the level of trust of those from the opposite political party is low, specifically in politically charged areas such as civil rights or the separation of church and state.

A different high-stakes situation occurs when another judge writes an opposing opinion. The stakes are likely high for two reasons. First, the very existence of an opposing opinion suggests that the issues in the case are more important and less constrained by precedent than usual (and when the case involves a hot-button issue like abortion, the issues are likely more political than usual) (Hettinger, Lindquist, and Martinek 2006). Second, the presence of a dissent serves to garner more than the usual amount of attention from outsiders.

One other bias we examine other than political bias is the tendency of judges to cite those who cite them. We formalize our hypothesis on mutual citation clubs as follows:

Hypothesis 3: Citation Club Hypothesis. When citing outside-circuit opinions, judges are more likely to cite judges who cite them frequently. The tendency to cite back increases with (a) the similarity of the political ideologies of the judges and (b) the strength of the personal relationship between the judges. The tendency decreases with (c) the status of the particular citing judge as an elite judge.

Judges may cite those who cite them for a variety of reasons. Judges may care about their citation counts because these counts increasingly constitute part of the evaluations of the judge's performance and legacy. They may develop implicit agreements with other judges that they will cite them if those other judges reciprocate with citations. We test three additional motivations behind the desire to engage in citation club practices. First, judges may cite judges with similar political ideologies more often. If we observe citation-club-like patterns in citations, such patterns may be driven by commonly held political beliefs. Where judges have similar ideologies, they will cite each other's opinions as supportive of their own views. Second, judges may cite other judges with whom they have a stronger personal relationship (such as having attended the same law school). A personal relationship may help ensure reciprocity in citations (that is, if I cite you, I know there's a greater chance you'll cite me back if we're friends). Third, judges of a particular elite stature and reputation may tend to avoid citation club practices. We hypothesize

that judges who command greater respect (for example, Judge Richard Posner) may have less need to engage in citation club practices to bolster their citation counts or burnish their reputations. Put differently, the other judges citing an elite judge are likely doing so primarily for the respectability and credibility that comes associated with such a citation, not out of the hope of reciprocal citations by that elite judge.

3. DATA SET DESCRIPTION

The data set consists of judicial opinions authored by federal circuit court judges from January 1, 1998, to December 31, 1999, as obtained from Choi and Gulati (2004). In assessing citations we constrained our sample to federal circuit court judges still active (and not with senior status) as of May 2003, when we started to compile the data.⁴ Judges near retirement may engage in different citation practices. A judge near retirement may not care as much about her reputation as a judge or the effect of reversals on her possibility of promotion (to the Supreme Court). Judges near retirement may also not benefit from fostering close relationships with judges of similar ideology or judges who cite them frequently since these professional relationships will not be lengthy.

Our constraint leaves us with opinions from a total of 98 judges. Starting from the set of opinions in Choi and Gulati (2004), we examined each opinion and coded citations from the set of 98 active judges in our sample back to one of those 98 judges. We impose these constraints for two reasons. First, judges likely pay attention to citations from other active judges who provide the prospect of future reciprocal citations. Only citations to active judges pose this possibility. Further, it is likely that the most recent cases provide the fullest description of the current law. Cases from multiple decades prior to a current case likely receive citations only when there is no more recent treatment of the issue or when the case itself has become canonical.⁵

Second, limiting our sample to the 98 active judges (and their citations back to opinions authored by one of those 98 judges) allows us to construct a control for the pool of opinions available for citation (that

4. To ensure a full 2 years of opinion data for each judge, we also excluded judges appointed after January 1, 1998.

5. Canonical cases present the additional complication that the analytical propositions that they stand for may become so well accepted that the authoring judge is no longer cited for it.

is, whether the pool of opinions is more Republican- or Democrat-judge authored). A judge may cite Republican-authored opinions more frequently simply because the pool of past opinions is relatively more Republican authored. We assume that because the opinions written by the active judges are all relatively recent, they all have an equal chance of citation absent bias. In contrast, if we had looked at citations to any opinion generally, we would lack a control pool against which to assess the citation pattern. Particularly for older opinions from nonactive judges, not all the opinions will have an equal chance of citation. Prior research tells us that the probability that a particular opinion will be cited depreciates over time (Landes and Posner 1976; Bhattacharya and Smyth 2001; Smith 2006). Including data for judges from more than a few decades prior to our data set would require us to make depreciation adjustments for judges of different vintages. By using only active judges, we avoid these adjustments. While opinions among even active judges are not all equal, the differences are less than if we were to include past judges or senior judges.

From the Choi and Gulati (2004) data set, we started with published opinions authored in 1998 and 1999, excluding the year 2000 because of resource constraints.⁶ For the 6,348 opinions from our data set that were authored in 1998 and 1999, we hand coded citations contained in each opinion, recording all citations to an opinion authored by one of the 98 federal circuit court judges in our sample. We code whether a judge cites judges who are of the same or opposite party, using the party of the president who nominated a judge as a proxy for the judge's political party.

We limit our analysis to outside-circuit citations, which leaves us with 3,072 opinions with at least one outside citation to a sample judge. Citations to judges within the same circuit, we assume, are more likely to be driven by the dictates of precedent than are outside-circuit citations. Focusing on outside citations puts the spotlight on opinions for which judges have the greatest discretion in their citation practice. That the choice to make an outside citation is highly discretionary suggests two things. First, for the most part, these citations will show up only when the issues are important and undecided (Solberg, Emrey, and Haire 2006), in other words, where there is no clear internal circuit precedent deciding the matter. Second, because judges tend to cite opinions from

6. Together with several research assistants, we spent over 2 years collecting the data for this article.

outside courts selectively (Klein 2002), these citations are unlikely to be routine or pro forma citations (such as the boilerplate string cites that some judges may cut and paste for matters such as the standard of review).⁷ A downside to using outside-circuit citations, though, is that we miss the opportunity to capture some of the patterns of reciprocal citation practices that may develop within circuits where judges build thick personal relationships over long periods of interaction. We also limit our analysis to published opinions. As Ashenfelter, Eisenberg, and Schwab (1995) discuss, omitting unpublished opinions excludes a substantial universe of judge-authored opinions. However, if judges do act with an ideological bias, we expect this bias to appear where ideology matters the most: published opinions that affect the development of precedent. Unpublished opinions, in contrast, provide judges with little ability to affect the development of the law.⁸

Developing data on which other judges are cited in a particular judge's opinions allows us to parse the bias question with added precision. Because we also code the cases in terms of subject areas, we can evaluate whether biases are more likely to occur in hot-button areas such as civil rights. The conventional method of collecting aggregate citation numbers and regressing them on a series of explanatory variables, including one for political affiliation, does not allow for parsing based on the subject matter of specific opinions. Table A1 provides the variables and their definitions, and Tables 1–3 report the summary statistics of our sample

4. EMPIRICAL TESTS

4.1. Party Bias Hypothesis

For each individual opinion, we calculate the number of outside-circuit citations that went to a judge of the opposite political party divided by

7. Another technique to separate out the strong citations from string or otherwise weak citations is to count only those citations with an accompanying explicit discussion of the case or a quote from it (Walsh 1997; Solberg, Emrey, and Haire 2006). Each of these techniques, though, is likely to be both under- and overinclusive in terms of sorting between strong and weak citations.

8. The following is an example of our coding: Judge Boudin wrote the majority opinion for *Flynn v. City of Boston* (140 F.3d 42 [1st Cir. 1998]). We looked through the opinion, coding for citations to any of our set of 98 active federal circuit court judges. In the opinion, Boudin cited one judge outside the First Circuit from our set of 98 judges: Judge Luttig of the Fourth Circuit. Both Boudin and Luttig were appointed by a Republican president. We therefore treated Boudin's citation of Luttig as a same-party, outside-circuit citation.

Table 1. Summary Statistics by Circuit Court

Circuit Court	1998		1999	
	Opinions	Percentage	Opinions	Percentage
1	105	7.0	116	7.4
2	88	5.9	63	4.0
3	82	5.5	92	5.8
4	98	6.6	117	7.4
5	185	12.4	196	12.4
6	100	6.7	125	7.9
7	260	17.4	282	17.9
8	103	6.9	99	6.3
9	116	7.8	133	8.4
10	146	9.8	156	9.9
11	120	8.0	131	8.3
D.C.	92	6.2	67	4.2
Total	1,495	100.0	1,577	100.0

Note. Percentages do not add to 100.0 because of rounding. Pearson $\chi^2(10) = 14.734$; Pr = .195.

Table 2. Summary Statistics by Opinion

Type of Opinion	Opinions	Percentage
Majority	2,801	91.2
Dissent	210	6.8
Concurring	61	2.0
Total	3,072	100.0

the total number of outside-circuit citations to one of the 98 judges in our sample (denoted *Opposite_Party*). Neither the number of judges nor the number of opinions written by the judges is equally divided between Republicans and Democrats. A judge may cite Republican-judge-written opinions more frequently because a greater fraction of the pool of past opinions came from Republican judges. To control for this, we calculate the pool of available outside-circuit opinions for each judge. First, we start with a particular judge (for example, Judge Boudin of the First Circuit). Second, we identify the judges in our set of 98 judges who are outside-circuit judges (for example, all judges in our sample who are outside the First Circuit). Third, for each outside-circuit judge, we tabulate the total number of opinions written prior to 1998, the start of our data set. Last, we calculate the number of opinions written by judges of the opposite political party divided by the total pool of opinions

Table 3. Summary Statistics for Variables

Variable	Mean	Median	SD	Skewness	Kurtosis
Opposite_Party	.423	.333	.420	.312	1.433
Opposite_Pool	.441	.301	.247	.544	1.347
Years_Exp	9.291	8.000	5.524	.418	2.292
Chief Judge	.095	.000	.293	2.761	8.626
Independence	-.078	-.067	.183	.076	3.322
GHP	.078	.116	.376	-.179	1.631
Opposition	.170	.000	.375	1.761	4.101
Opposition_Same Party	.063	.000	.244	3.581	13.822
Opposition_Opposite Party	.099	.000	.299	2.686	8.215
Top5_Cites	.191	.000	.321	1.611	4.306
Top5_Pool	.141	.134	.056	1.095	3.910
Top5_Same_Party	.621	.826	.393	-.571	1.497
Influential Judge	.102	.000	.303	2.626	7.897
Less Well Represented School	.288	.000	.453	.934	1.873

written by all outside-circuit judges in our sample prior to 1998 (denoted *Opposite_Pool*). If judges were to cite outside-circuit judges randomly, the *Opposite_Pool* fraction would represent the baseline fraction of outside-circuit opinions to judges of the opposite political party available to be cited.

Table 4 reports a *t*-test comparison of the mean for the variables *Opposite_Party* and *Opposite_Pool*. For the pool of all judges in our sample, the fraction of outside-circuit citations to opposite-party judges is equal to .423. In contrast, the pool of opinions for the opposite party judges as a fraction of the pool of past opinions is equal to .441. The difference between *Opposite_Party* and *Opposite_Pool* is significant at the 1 percent confidence level. On average, judges have a tendency to prefer citing judges of their political party, which supports the party bias hypothesis.

Table 4 also reports the comparison between *Opposite_Party* and *Opposite_Pool* separately for Democrat and Republican judges. Democrat judges are significantly less likely to cite judges of the opposite party. No significant difference, however, exists between the tendency of Republican judges to cite judges of the opposite party outside their circuit compared with the pool of opposite-party opinions. At first glance, it appears that Democrat judges are more biased than their Republican counterparts.⁹

9. The comparison of Democrat and Republican judges in terms of citation patterns, despite our correction for pool effects, remains complicated because of the differential in

Table 4. Fraction of Outside-Circuit Citations to Opposite-Party Judges Relative to the Pool of Opinions

	N	Opposite_Party	Opposite_Pool	P
All opinions	3,072	.423	.441	.005
Authored by Democrat judge	1,120	.732	.765	.002
Authored by Republican judge	1,952	.246	.255	.253

Note. The *P*-value is for a *t*-test of the difference in means between Opposite_Party and Opposite_Pool.

4.2. Opinion Subject Matter

The tendency of judges to cite judges of the opposite political party may vary depending on the subject matter of the opinion. For more salient, high-stakes cases, judges may have an increased propensity to decide along party lines. An opinion dealing with a civil rights issue may result in an increased level of partisanship compared with an opinion dealing with a private contract law issue. To examine whether subject matter determines citation practices, we categorize our opinions into 18 categories plus an “other” category for opinions we do not specifically categorize (for a total of 19 categories). A description of each subject matter category is provided in Table A2.

Sunstein, Schkade, and Ellman (2004) find that ideological effects in judicial voting patterns are stronger for certain categories of cases, including politically heated areas such as civil rights. Our goal was to test for the presence of subject area effects in citation data. Sunstein, Schkade, and Ellman used 14 categories of cases, including abortion, capital punishment, piercing the corporate veil, campaign finance, affirmative action, and federalism.

For two reasons, we had to modify the Sunstein, Schkade, and Ellman categorization. First, our data set was constructed to capture the full range of cases decided by active federal appellate court judges over the

the pools. The pool of Republican-judge-authored opinions (approximately 75 percent of the overall pool) is much larger than the pool of Democrat-judge-authored opinions. This means that Republican judges are more likely to have the option of citing a same-party-authored opinion on any particular topic than are their Democrat counterparts. For example, on the question of how to calculate damages in a securities fraud case, a Democrat judge might find that she has no option but to cite a Republican-judge-authored opinion, whereas a Republican judge in the same position might find that she has two or three Republican-judge-authored opinions on the topic. The implication then is that we should be more likely to find that Republicans disproportionately cite other Republicans than their Democrat counterparts. What we find is the converse.

1998–1999 period. That choice produced a larger number of subject areas than Sunstein, Schkade, and Ellman had, particularly in the area of private law. We therefore constructed subject matter categories for a variety of private law areas, including private law (contracts, creditor versus debtor law, and so forth), intellectual property, tax, federal business law (securities regulation, bankruptcy, and so forth), and torts. Second, because we looked at only a 2-year period, there were certain areas, such as abortion, for which we did not have enough cases to conduct a meaningful analysis. Hence, we had to broaden the size of our subject matter categories beyond those of Sunstein, Schkade, and Ellman. For example, we combined all the cases involving civil rights, including abortion cases, into a single rights category, whereas Sunstein, Schkade, and Ellman had six separate categories of civil rights cases (affirmative action, sex discrimination, sexual harassment, Title VII, disability, and abortion).

The next step was to find an exogenous method of determining which subject areas were high-stakes areas with political salience for circuit court judges. For that, we followed Epstein and Segal (2000) in focusing on news stories relating to the U.S. Supreme Court on the front page of the *New York Times*. We assumed that issues getting the most discussion in the context of the Supreme Court were likely politically salient from a circuit court judge's point of view. We examined *New York Times* front-page articles from the period between January 1, 1993, and December 31, 1997.¹⁰ Looking at this time period, representing the 4-year period preceding the commencement of our data set, allows us to canvass those issues most salient to judges at the time. The time period included two nominations and confirmations to the Court (Justices Ginsburg and Breyer), raising the likelihood that articles within the time period discussed issues most salient to the selection of justices to the Court. We skimmed each article and counted references to our subject matter categories (that is, if both abortion and capital punishment were mentioned in a particular article, we counted one mention in the rights category and one mention in the capital punishment category). Results are reported in Table A3.

The category with the greatest salience was the rights category, with almost 200 mentions (over four times the number of mentions as the second-highest category, First Amendment). Some of our subject matter

10. We searched for "supreme court" in the Westlaw NYT data base and focused only on stories that we determined dealt with the U.S. Supreme Court.

Table 5. Subject Matter of Opinions

	<i>N</i>	Opposite_Party	Opposite_Pool	<i>P</i>
Category:				
Church and state	18	.454	.476	.756
Campaign finance	23	.367	.477	.146
Federalism	16	.413	.418	.957
First Amendment	76	.412	.453	.276
Rights	447	.396	.436	.011
Government actions	40	.32	.399	.103
Capital punishment	76	.39	.45	.097
Administrative law	99	.471	.477	.887
Takings and property	21	.356	.379	.813
Tax	68	.456	.481	.592
Federal business law	210	.373	.413	.109
Environment	48	.502	.440	.230
Intellectual property	48	.493	.460	.546
Torts	98	.334	.384	.181
Immigration	50	.527	.478	.413
Criminal	1,114	.448	.447	.878
Labor	359	.399	.451	.007
Private law	156	.407	.403	.872
Other	105	.475	.441	.329
Top salient	816	.402	.442	.000
Bottom salient	2,256	.431	.440	.211
Total	3,072	.423	.441	.005

Note. The *P*-value is for a *t*-test of the difference in means between Opposite_Party and Opposite_Pool.

categories span a greater body of law than others do. We may observe more articles relating to criminal law than campaign finance because of the breadth of our definition of the criminal law area. To scale each category, we divide the number of mentions by the total number of authored opinions in our data set for that subject matter category. Using this ratio, the top five subject matter categories in terms of public salience include church and state, campaign finance, federalism, First Amendment, and rights.

Table 5 provides a breakdown of the number of opinions in our sample for each category and a *t*-test comparison of the means for Opposite_Party and Opposite_Pool for each category. Among the subject matter categories in the top half as ranked by salience, the coefficient for Opposite_Party is lower than that for Opposite_Pool for the rights category of opinions (the difference is significant at just above the 1 percent confidence level). The difference between the coefficients for the capital punishment category is significant at the 10 percent level. For

the subject matter categories in the bottom half as ranked by salience, only the coefficients for the labor category show a significant difference (at the 1 percent level).

Many of the subject matter categories have only a small number of cases—for example, there are only 16 federalism cases. We therefore also examine the aggregate of the subject matter categories in the top half as ranked by salience (Top Salient) and the aggregate of those categories in the bottom half (Bottom Salient). Table 5 reports that the coefficient for *Opposite_Party* for the top-salient category is significantly lower than that for *Opposite_Pool* (significant at the 1 percent level), and this finding is consistent with judges avoiding opposite-party citations in high-stakes cases. In contrast, no significant difference exists for coefficients for the bottom-salient category. This result is consistent with the high-stakes hypothesis. The presence of bias in only certain subject matter areas, particularly those in the top-salient category, supports the view that the evidence in support of bias in citations (the party bias hypothesis) is not spurious but rather reflects the underlying decision-making processes of judges.

To examine the high-stakes hypothesis further, we estimate an ordinary least squares model. The unit of analysis in our model is an opinion authored by a judge in our sample. The model is as follows:

$$\begin{aligned} \text{Opposite_Party}_i = & \alpha + \beta_{1i} \text{Top Salient} + \beta_{2i} \text{GHP} \\ & + \beta_{3i} \text{Top Salient} \times \text{GHP} + \sum \beta_{ki} \text{Control}_{ki} \\ & + \text{Year Effects} + \text{Circuit Effects} + \varepsilon_i. \end{aligned}$$

We include *Top Salient* to assess the importance of political salience in determining the tendency of a judge to avoid citations to opposite-party outside-circuit judges. To determine the importance of a judge's political leanings for whether the judge will side with opposite-party judges, we include a continuous measure of a judge's ideology obtained from Giles, Hettinger, and Peppers (2001) and call it *GHP*.¹¹ The variable *GHP* stands for a score based on the ideological preferences of the appointing president and home state senators that ranges from -1 (most liberal) to $+1$ (most conservative). The *GHP* score is correlated with whether a judge is Republican (correlation coefficient = .8534) and provides a continuous analog to our binary Republican/Democrat classification of judges. We include an interaction term, *Top Salient* \times *GHP*,

11. We thank Stefanie Lindquist for giving us these scores.

to examine whether political leanings take on any additional importance for high-stakes opinions.

Our model includes a number of control variables specific to a judge that may affect the incidence of citations to other party judges. The term *Opposite_Party* is the number of citations contained in an opinion that are to judges (in the sample of 98 judges) of the opposite political party as a fraction of the number of citations in the opinion to any of the sample judges. We include *Opposite_Pool* to control for the pool of past opinions that a judge may cite.

We include the log of the years of experience of the specific judge (expressed as $\text{Ln}(\text{Year_Exp})$). Judges with more experience on the bench may develop a stronger sense of their favored judges and cases to cite. We also use an indicator variable for whether the author is the chief judge of her particular circuit. Holding the position of chief judge may lead judges to take more neutral postures in their citation practices.

A control for the independence of the judge is also included. We expect judges who are generally skewed toward one political end of the spectrum to exhibit this bias in their citation practices. In creating this measure in Choi and Gulati (2004), we obtained the percentage of opposing opinions (for example, a dissent against a majority opinion and a majority against a dissent opinion) for which a particular judge wrote an opposing opinion against the opinion of a judge of the same political party (the *Actual Same Party Opposing Fraction*). For each judge, we determined the political party (as proxied by the party of the appointing president) of the other active judges on each circuit from 1998 to 1999 (including those who eventually gained senior status or retired), obtaining the baseline percentage of same-party judges on the circuit (the *Predicted Same Party Opposing Fraction*). If a judge opposes other judges on the same circuit at random, we posit that the *Actual Same Party Opposing Fraction* should equal the *Predicted Same Party Opposing Fraction*. Independence is defined as being equal to the *Actual Same Party Opposing Fraction* minus the *Predicted Same Party Opposing Fraction*. A more negative number under our independence measure indicates a judge who avoids taking positions opposite those of judges of the same political party.

Year and circuit fixed effects serve to control for differences related to the year of the opinion and the circuit in which the authoring judge sits. The Seventh Circuit, for example, is notorious for the volume of opinions its judges publish. Producing a high volume of opinions may lead judges to focus less on citations, leading to more neutral citation

Table 6. Ordinary Least Squares Model of Opposite_Party

Variable	Model 1	Model 2
Top Salient	-.034* (-2.320)	-.033* (-2.270)
GHP	-.022 (-.580)	
Top Salient × GHP	.017 (.440)	
Opposite_Pool	.905** (15.720)	
Ln(Year_Exp)	-.006 (-.450)	
Chief Judge	-.026 (-1.160)	
Independence	.003 (.080)	
Constant	.061 (1.300)	.441** (45.630)
Circuit fixed effects	Yes	No
Judge fixed effects	No	Yes

Note. Both models contain year fixed effects and have 3,072 observations. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The adjusted R^2 -value was .312 for model 1 and .313 for model 2.

* Significant at the 5% level.

** Significant at the 1% level.

practices. Similarly, there are circuits, such as the Fourth Circuit, that are thought of as overtly politicized.

Table 6 reports the results from our model.¹² Note from model 1 that the coefficient on Top Salient is negative and significant at the 5 percent level. Judges authoring high-stakes opinions are less likely to cite opposite-party judges than same-party judges. The results from model 1 are consistent with the high-stakes hypothesis. Unlike our summary statistics, though, we find no difference in the tendency to avoid opposite-party judges among judges with different degrees of political leanings as measured by the GHP score. The coefficient on GHP is not significantly different from zero. Similarly, the coefficient on Top Salient × GHP is not significantly different from zero. Even in opinions involving high-stakes subject matters, the degree of political leaning of a particular judge does not correlate with the tendency to avoid citations to opposite-party judges.

Model 1 also allows us to examine the question of circuit biases. We use the First Circuit, a traditionally respected circuit, as our baseline for the circuit fixed effects in our model. Only the Fifth Circuit (significant at the 5 percent level) and the Sixth Circuit (significant at the 10 percent level) were significantly different from the First Circuit baseline (data not shown). For the Fifth and the Sixth Circuits, the coefficient was

12. For ease of exposition, we do not report all of the individual circuit and judge fixed effect coefficients in our models.

positive, which indicates that the judges in these circuits display a greater tendency to cite opposite-party judges, other things being equal. However, we test the null hypothesis that the coefficients on all the circuit variables are equal to each other and zero and are unable to reject the null hypothesis ($F(10,3036) = 1.37$; $\text{Prob} > F = .1817$).

Perhaps what matters is not whether a judge is more liberal (a negative GHP score) or conservative (a positive GHP score) but instead that a judge is more ideological, whether liberal or conservative, compared with being neutral (a zero GHP score). To test for this, we reestimate model 1 and replace the GHP variable with the absolute value of the GHP score instead. The coefficients on the absolute value of GHP and Top Salient interacted with the absolute value of GHP are not significantly different from zero (data not shown).

As an additional robustness check, we omit judge-author specific variables (GHP, Top Salient \times GHP, Opposite_Pool, Ln(Year_Exp), Chief Judge, and Independence) and circuit fixed effects and instead include judge fixed effects in the model, reported as model 2 in Table 6. We obtain the same qualitative results as those for model 1.¹³

To focus more specifically on the different subject matter categories, we replace Top Salient and the Top Salient \times GHP interaction term in model 1 with indicator variables for the 18 subject matter categories, using the “other” category as the base category. The results for model 1 are presented in Table 7. Note that among the top-salient categories, the coefficients on the rights and government action categories are negative and significant at the 5 percent level; similarly the coefficients on the campaign finance and capital punishment categories are significant at the 10 percent level. In contrast, for the bottom-salient category, the coefficient on Labor is negative and significant at the 5 percent level, and the coefficient on Federal Business Law is negative and significant at the 10 percent level. Compared with the “other” base category, judges are more likely to avoid citation to opposite-party judges for these spe-

13. Federal circuit court judges use clerks. Clerks may affect citation patterns. We control for the influence of clerks with a proxy for the propensity of a specific judge to author opinions (and presumably rely less on clerks). Our proxy is the log of the total number of self-citations by a judge to opinions authored from 1998 to 2000, as obtained from Choi and Gulati (2004). We expect that judges who author their own opinions will have greater familiarity with their own opinions and therefore will be more likely to cite themselves than those judges who delegate research and writing to their law clerks (Landes, Lessig, and Solimine 1998). The addition of the variable for log of the total number of self-citations (data not shown) does not alter the qualitative results of models 1 or 2 shown in Table 6.

Table 7. Ordinary Least Squares Model of Opposite_Party by Subject Matter

Variable	Model 1		Model 2	
Church and State	-.073	(-.930)	-.075	(-.960)
Campaign Finance	-.145 ⁺	(-1.830)	-.151 ⁺	(-1.890)
Federalism	-.030	(-.280)	-.021	(-.200)
First Amendment	-.068	(-1.340)	-.077	(-1.490)
Rights	-.076*	(-2.020)	-.075 ⁺	(-1.930)
Government Actions	-.122*	(-2.100)	-.116 ⁺	(-1.940)
Capital Punishment	-.097 ⁺	(-1.940)	-.100 ⁺	(-1.950)
Administrative Law	-.041	(-.790)	-.049	(-.930)
Takings and Property	-.072	(-.740)	-.078	(-.760)
Private Law	-.036	(-.810)	-.035	(-.780)
Tax	-.051	(-.920)	-.055	(-.990)
Federal Business Law	-.076 ⁺	(-1.800)	-.076 ⁺	(-1.740)
Environment	.032	(.530)	.035	(.580)
Intellectual Property	.006	(.090)	.008	(.120)
Torts	-.087 ⁺	(-1.720)	-.085 ⁺	(-1.650)
Immigration	.018	(.270)	.025	(.360)
Criminal	-.034	(-.950)	-.035	(-.960)
Labor	-.084*	(-2.150)	-.086*	(-2.120)
GHP	-.019	(-.530)		
Opposite_Pool	.899**	(15.580)		
Ln(Year_Exp)	-.008	(-.570)		
Chief Judge	-.026	(-1.150)		
Independence	.004	(.100)		
Constant	.109 ⁺	(1.900)	.484**	(13.570)
Circuit fixed effects	Yes		No	
Judge fixed effects	No		Yes	

Note. Both models contain year fixed effects and have 3,072 observations. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The adjusted *R*²-value for both models was .313.

- ⁺ Significant at the 10% level.
- * Significant at the 5% level.
- ** Significant the 1% level.

cific categories of opinions. While the top-salient (bottom-salient) category as a group displays significant (insignificant) party bias, variation exists within the specific subject matter categories. Judicial bias may extend into areas such as business law that are not conventionally thought of as scenes of ideological bias.¹⁴

As a robustness check, we omit judge-author specific characteristic variables (GHP, Opposite_Pool, Ln(Year_Exp), Chief Judge, and Independence) and circuit fixed effects and instead include judge fixed effects

14. Sunstein, Schkade, and Ellman (2004) similarly find that ideological voting extends to cases involving piercing the corporate veil.

and report the results of model 2 in Table 7. We obtain the same qualitative results as those for model 1.¹⁵

4.3. Opposing Opinions

We analyze whether judges are less likely to cite judges of the opposite political party when faced with opposition from another judge in the same case. Looking at cases in which judges chose to dissent gives us a different method of testing whether bias exists in high-stakes issues. There are likely to be issues in otherwise mundane areas such as securities law that might be politically heated—for example, the issue of what the pleading standard ought to be for securities fraud class actions. Put another way, while our subject matter categories are suggestive as to what types of opinions may lead judges to look to judges of the same political party, the categories likely imperfectly track where bias occurs. In contrast, the writing of a dissent takes additional effort, and we assume that these resource-constrained judges will use their time and energy to write dissents only when they consider issues to be of special importance. Similarly, we posit that judges writing majority opinions facing dissents will take extra care in crafting their opinions.

To assess the impact of an opposing judge, we add the Opposition indicator variable (set equal to one if there exists an opposing opinion and zero otherwise) to models 1 and 2. An opposing opinion situation exists when (1) a judge writes a majority opinion and a dissent is present and (2) when a judge writes a dissenting opinion against a majority opinion. Table 8 reports our results.

Note that the coefficient on Opposition is negative and significant at the 5 percent level for model 1 (which includes circuit and year fixed effects) and negative and significant at the 10 percent level for model 2 (which includes judge and year fixed effects). Evidence exists that judges are less likely to cite opposite-party judges when either dissenting against majority opinions or writing the majority opinion when a dissent exists.

15. To assess the importance of the political beliefs of the citing judge, we added interaction terms for each subject matter variable and the GHP score (for example, Private Law \times GHP) to model 1. These interaction terms allow us to see whether liberal or conservative judges tend to engage in more biased citation patterns. The coefficients for the interaction terms between Private Law, First Amendment, and Church and State and GHP are negative and significant at the 10 percent level (data not shown). More conservative judges are less likely to cite opposite-party judges for these types of cases. However, the coefficient on Immigration \times GHP is positive and significant at the 10 percent level. More conservative judges are more likely to cite opposite-party judges for immigration cases. It is unclear what to make of the difference in the pattern of bias.

Table 8. Opposing Opinions

Variable	Model 1	Model 2
Opposition	-.034* (-2.030)	-.030+ (-1.760)
Top Salient	-.032* (-2.170)	-.031* (-2.140)
GHP	-.021 (-.560)	
Top Salient × GHP	.018 (.460)	
Constant	.070 (1.500)	.446** (44.350)
Judge controls	Yes	No
Circuit fixed effects	Yes	No
Judge fixed effects	No	Yes

Note. The dependent variable is *Opposite_Party*. Judge controls include *Opposite_Pool*, *Ln(Year_Exp)*, *Chief Judge*, and *Independence* and are not reported. Both models contain year fixed effects and have 3,072 observations. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The adjusted R^2 -value for both models was .313.

+ Coefficient significant at the 10% level.

* Coefficient significant at the 5% level.

** Coefficient significant at the 1% level.

This result is consistent with the high-stakes hypothesis that judges look to their own party for support in citing outside-circuit opinions when they face an opposing opinion in the same case.¹⁶

To assess further the incentive to cite opinions written by judges of the same party when faced with an opposing opinion, we replace *Opposition* in models 1 and 2 of Table 8 with the indicator variables *Opposition_Same Party* and *Opposition_Opposite Party* (reported as models 1 and 2 in Table 9).¹⁷ *Opposition_Same Party* is equal to one if the opposition opinion involves a judge of the same political party and zero otherwise. *Opposition_Opposite Party* is equal to one if the opposition opinion involves a judge of the opposite political party and zero otherwise. We also exclude the *Top Salient × GHP* interaction term from the model. Instead, we include the interaction terms *Top Salient × Opposition_Same Party* and *Top Salient × Opposition_Opposite Party*. These interaction terms allow us to examine whether citation practices differ in opposition situations involving high-stakes subject matter categories.

Table 9 reports that the coefficients on *Opposition_Same Party* are

16. For robustness, we reestimated model 1, replacing *Top Salient* and *Top Salient × GHP* with the 18 indicator variables for the subject matter categories (using “other” as the base category). We obtained similar qualitative results with respect to *Opposition*: negative and significant at the 10 percent level (data not shown).

17. Note that *Opposition* = *Opposition_Same Party* + *Opposition_Opposite Party*.

Table 9. Opposing Opinions by Party

Variable	Model 1		Model 2	
Opposition_Same Party	-.034	(-.970)	-.035	(-1.010)
Opposition_Opposite Party	-.064*	(-2.580)	-.059*	(-2.330)
Top Salient	-.039*	(-2.420)	-.040*	(-2.440)
Top Salient × Opposition_Same Party	.043	(.800)	.054	(.990)
Top Salient × Opposition_Opposite Party	.045	(1.040)	.044	(1.010)
GHP	-.016	(-.440)		
Constant	.448**	(44.070)	.448**	(44.070)
Judge controls	Yes		No	
Circuit fixed effects	Yes		No	
Judge fixed effects	No		Yes	

Note. The dependent variable is *Opposite_Party*. Judge controls include *Opposite_Pool*, *Ln(Year_Exp)*, *Chief Judge*, and *Independence* and are not reported. Both models contain year fixed effects and have 3,072 observations. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The adjusted R^2 -value for both models was .313.

* Coefficient significant at the 5% level.

** Coefficient significant at the 1% level.

not significantly different from zero in both models. Judges do not act differently in their citation behavior when facing an opposing opinion from a same-party judge. In contrast, the coefficients on *Opposition – Opposition Party* are negative and significant at the 5 percent level in both models. Judges tend to avoid citing judges of the opposite party, particularly when faced with an opposing opinion of a judge from the opposite party. Political affiliation matters more when the issues are in contention (which is proxied for by the presence of an opposing opinion by a judge of the opposite party). The coefficients on the interaction terms *Top Salient × Opposition_Same Party* and *Top Salient × Opposition_Opposite Party* are not significantly different from zero. The tendency of judges to avoid citing opposite-party judges when faced with an opposing opinion authored by an opposite-party judge is not more pronounced for high-stakes subject matter categories.¹⁸

Judges may act differently when writing for the majority (when they have the support of another judge) compared to when they act alone in

18. For robustness, we reestimated models 1 and 2, omitting *Top Salient* and the interaction terms with *Top Salient* and adding the 18 indicator variables for the subject matter categories (using “other” as the base category). We obtained similar qualitative results with respect to *Opposition_Same Party* and *Opposition_Opposite Party*. *Opposition_Opposite Party* was negative and significant at the 5 percent level in both reestimated models (data not shown).

Table 10. Opposing Opinions by Party and Type of Opinion

Variable	Model 1		Model 2	
Majority_v_Dissent_Same Party	-.022	(-.680)	-.020	(-.610)
Majority_v_Dissent_Opposite Party	-.058*	(-2.410)	-.051*	(-2.080)
Dissent_v_Majority_Same Party	-.017	(-.380)	-.014	(-.320)
Dissent_v_Majority_Opposite Party	-.034	(-.990)	-.034	(-.990)
Top Salient	-.032*	(-2.160)	-.031*	(-2.120)
GHP	-.022	(-.590)		
Top Salient × GHP	.017	(.440)		
Constant	.072	(1.540)	.446**	(44.400)
Judge controls	Yes		No	
Circuit fixed effects	Yes		No	
Judge fixed effects	No		Yes	

Note. The dependent variable is *Opposite_Party*. Both models contain year fixed effects and have 3,072 observations. Judge controls include *Opposite_Pool*, $\ln(\text{Year_Exp})$, Chief Judge, and Independence and are not reported. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The adjusted R^2 -value for both models was .313.

* Coefficient significant at the 5% level.

** Coefficient significant at the 1% level.

writing an opposing opinion. In the case of a majority opinion, a judge with the support of another judge may become emboldened to take a more partisan stance. We predict that judges writing majority opinions for which dissents exist will display greater bias in their citation patterns. *Majority_v_Dissent* is defined as an opposition situation in which the judge in question authors a majority opinion and another judge authors a dissent. *Dissent_v_Majority* is defined as an opposition situation in which the judge in question authors a dissenting opinion and another judge authors the majority opinion. Using these definitions, we replace Opposition in models 1 and 2 of Table 8 with *Majority_v_Dissent_Same Party*, *Majority_v_Dissent_Opposite Party*, *Dissent_v_Majority_Same Party*, and *Dissent_v_Majority_Opposite Party*.¹⁹ Table 10 reports our results.²⁰

Note that the coefficient is negative and significant (at the 5 percent

19. Note that $\text{Opposition} = \text{Majority_v_Dissent_Same Party} + \text{Majority_v_Dissent_Opposite Party} + \text{Dissent_v_Majority_Same Party} + \text{Dissent_v_Majority_Opposite Party}$.

20. For robustness, we reestimated model 1, omitting Top Salient and the interaction terms with Top Salient and adding the 18 indicator variables for the subject matter categories (using “other” as the base category). We obtained similar qualitative results with respect to *Majority_v_Dissent_Same Party*, *Majority_v_Dissent_Opposite Party*, *Dissent_v_Majority_Same Party*, and *Dissent_v_Majority_Opposite Party*. *Majority_v_Dissent_Opposite Party* was negative and significant at the 5 percent level (data not shown).

level) for only the Majority_v_Dissent_Opposite Party interaction term in both model 1 (which includes circuit fixed effects) and model 2 (which includes judge fixed effects). The opposing-opinion bias effect exists primarily when a judge writes a majority opinion in the presence of a dissenting opinion by an opposite-party judge. This finding is consistent with the view that judges, joined with other judges in a majority opinion, are more likely to act in a biased manner when faced with a dissenting opinion from an opposite-party judge. A next research step would be to collect data on panel compositions and determine whether the effect is exacerbated when the second judge in the majority is of the same party as the writing judge.

4.4. Citation Club Hypothesis

To examine the citation club hypothesis, we make a summary statistic comparison of the tendency of our sample judges to cite those who cite them. We start by identifying for each judge in our sample the top five outside-circuit judges (among other sample judges) who cited the particular judge the most (termed the “top five judges”). For example, consider Judge Easterbrook of the Seventh Circuit. Outside of the Seventh Circuit, Judges Selya, King, Boggs, Boudin, and Lynch cited Easterbrook the greatest number of times in opinions authored in our sample period from 1998 to 1999. For each opinion, we count the number of times each judge cites the top five judges as a fraction of the total outside-circuit citations to the sample judges. We call this fraction the Top5_Cites.

As a comparison baseline, we calculate the total number of opinions written by a top-five judge as a fraction of the total number of opinions written by outside-circuit judges prior to 1998 (denoted as Top5_Pool).²¹ A *t*-test comparison of the means for Top5_Cites and Top5_Pool showed that the mean for Top5_Cites (.186) is greater than the mean for Top5_Pool (.140) (difference significant at the 1 percent level). Judges are more likely to cite judges who cite them frequently, and this finding is consistent with the citation club hypothesis.

We hypothesize that at least three different factors may affect a judge’s propensity to cite judges who cite them. First, judges may cite judges of a similar political persuasion. Second, judges with stronger

21. In several instances, ties occurred among judges, which led to more than five judges who would qualify for the top-five category. In these situations, we adjusted the variable Top5_Pool by including all tied judges to establish a comparison baseline.

relationship ties with their specific top five outside-circuit judges may cite them more frequently. Third, judges with particularly high reputations may cite their top five judges differently.

We estimate a multivariate model with Top5_Cites as the dependent variable as follows, and the unit of analysis in our model is an individual judicial opinion authored by a judge in our sample:

$$\text{Top5_Cites}_i = \alpha + \sum \beta_j \text{Test_Variables}_{ji} + \sum \beta_k \text{Control}_{ki} \\ + \text{Year Effects} + \text{Circuit Effects} + \varepsilon_i.$$

We utilize a number of test variables in the model (denoted collectively as Test_Variables_{ji}). First, to test the importance of politics, we include Top5_Same_Party, defined as the total number of opinions by top-five judges before 1998 who are of the same party as the judge in question divided by the total number of opinions by top-five judges before 1998. A judge may be more likely to cite a top-five judge if the top five judges are of the same political party. We also include Independence, our measure of how independent a particular judge is from party ideology (Choi and Gulati 2004). More independent judges may not respond as much to ideology or citation club incentives and cite their top five judges less frequently than less independent judges do.

Second, to assess the importance of relationship ties, we include whether the judge graduated from a law school other than Harvard or Yale, the two elite schools with a traditional dominance in the top positions in the federal judiciary and the greatest number of graduates among our sample of judges (denoted Less Well Represented School). Judges from less elite schools with lower representation among active judges may feel a greater need to foster relationships with other judges through citation practices. Alternatively, such judges may feel stronger ties with the relatively small number of judges who did go to the same less well represented school. To assess this latter possibility, we determine the fraction of the top five judges who graduated from the same law school as each particular judge (denoted Same School Fraction) and include the variable in the model. We also include the log of the number of years of experience for each judge in our sample (expressed as ln(Year_Exp)). Judges with more experience will have had a longer time to develop stronger ties with other judges.

Third, we examine the importance of two types of elite judges. We include an indicator variable for whether the authoring judge is one of the highest ranked judges based on the number of invocations by name

each judge received in the opinions of outside-circuit judges in our sample (we denote the first five judges ranked on the basis of invocations Influential Judge).²² Invocations indicate a special sign of respect (Choi and Gulati 2004). We also include an indicator variable for whether the authoring judge was the chief judge of her circuit at the time of the opinion (denoted Chief Judge). Influential or chief judges, because of their positions, may not need to cite their top five judges to improve their reputation and may wish instead to foster a reputation of neutrality. However, influential or chief judges may, because of their typically longer tenure on the bench and higher reputation, develop stronger relationships with outside-circuit judges, leading to greater citation club practices.

We include Top5_Pool to control for the pool of pre-1998 opinions authored by the top five judges. Whenever the top five judges wrote more opinions relative to all other judges, we expect a greater fraction of citations to these judges because of their large pool of past opinions. We also include Opposition as a control, to distinguish situations in which the opinion is in opposition to another judge's opinion on the same case. We include Top Salient to control for the effect of an opinion's public salience on citation club practices. Finally, the model includes year fixed effects and circuit fixed effects to control for differences related to the specific year of the opinion and the circuit court of the judge in question.

Table 11 reports our results. First, observe that the coefficient on Top5_Same_Party is not significantly different from zero. We find no evidence that judges are more likely to cite the top five judges when a greater fraction of the top five judges are of the same political party. In contrast, the coefficient on Independence is negative and significant at the 10 percent level in model 1. A more negative Independence coefficient indicates a greater tendency to side with one's own party. Weak evidence exists, therefore, that judges who tend to side with their own party are also more likely to cite those who cite them.

Second, our results indicate that more elite judges do not tend to cite the same set of familiar judges citing them. The coefficients on Influential Judge and Chief Judge are not significantly different from zero in model 1.

Third, note that the coefficient on Less Well Represented School is positive and significant at the 1 percent level in model 1. The positive coefficient indicates that graduates of schools other than Harvard and Yale are more likely to engage in citation club practices. In model 1 the

22. These were Judges Posner, Easterbrook, Calabresi, Wilkinson, and Boudin.

Table 11. Citation Clubs

Variable	Model 1		Model 2	
Top5_Same_Party	.010	(.570)	.021	(1.130)
Independence	-.061 ⁺	(-1.750)	-.063 ⁺	(-1.790)
Influential Judge	.030	(1.250)	.025	(1.030)
Chief Judge	.038	(1.640)	.038 ⁺	(1.680)
Less Well Represented School	.057**	(2.720)	.061**	(2.840)
Same School Fraction	.125 ⁺	(1.650)	.127 ⁺	(1.680)
Ln(Year_Exp)	-.016	(-1.400)	-.019	(-1.630)
Year_Exp_Differential			.003	(1.210)
Top5_Pool	.988**	(7.250)	1.018**	(7.310)
Opposition	.010	(.640)	.010	(.670)
Top Salient	-.001	(-.060)	-.001	(-.040)
Constant	.014	(.410)	-.008	(-.210)

Note. The dependent variable is Top5_Cites. Both models contain year fixed effects and circuit effects and have 3,054 observations. The *t*-statistics (in parentheses) are calculated using Huber-White robust standard errors. The *P*-value is for a *t*-test of the difference in means between Top5_Cites and Top5_Pool. The adjusted *R*²-value for both models was .035.

⁺ Coefficient significant at the 10% level.

** Coefficient significant at the 1% level.

coefficient on Same School Fraction is positive and significant at the 10 percent level. This finding is consistent with the view that, at least for some judges, law school alumni network effects are driving the citation club results.²³

Judges may cite other judges with whom they have developed a long-term familiarity. The log of the number of years of experience in the circuit court is not significant, however. As a further test for this possibility, we add Year_Exp_Differential to model 2, defined as the absolute value of the difference between a judge's years of experience on the federal circuit court and the mean years of federal circuit court experience for the top five judges. A judge in roughly the same experience cohort as the top five judges who cites a top-five judge will have a low value for Year_Exp_Differential. As is shown in Table 11, with this experience cohort variable in model 2, we obtain the same qualitative results as in model 1 (with the coefficient on Chief Judge still positive

23. We also added the interaction term Less Well Represented School × Same School Fraction to model 1. The interaction term was not significantly different from zero (data not shown). We therefore do not find evidence that the importance of attending the same law school as the top five judges is any greater for judges that attended a less well represented law school.

but now significant at the 10 percent level). The coefficient on *Year_Exp_Differential* in model 2 is not significantly different from zero, which is consistent with the view that experience cohort network effects are not driving the tendency toward the citation club effect we observe.

Other types of bonds are possible among judges. The smaller the community to which judges belong, the more likely it is that these communal bonds will affect those judges' decision making. Judges who clerked for the same judge may enjoy enduring relationships with one another. Similarly, judges who worked together at the Office of Legal Counsel or the solicitor general's office may view one another as close colleagues. We leave to future research the question of whether more tightly knit bonds between judges may affect citation practices.

4.5. Other Biases

Our analysis examines only how political ideology bias may affect judicial citation practices. Biases involving race, gender, and other factors are also possible. We test the importance of one of these other possible biases: gender.²⁴ We divide our count of outside-circuit citations into those to male and those to female judges. As a point of comparison, we look at the pool of outside-circuit opinions authored prior to 1998 for male and female judges in our sample of 98 judges. We then compare the fraction of outside-circuit citations to male judges against the pool of outside-circuit opinions authored by male judges for opinions written by (a) the group of all judges in our sample, (b) male judges, and (c) female judges.²⁵ Table 12 reports our results.

Note from Table 12 that for all three categories of judges (all, male only, and female only), the difference between the actual fraction of outside-circuit citations to male judges and the pool of available male-authored opinions is not significantly different from zero. Unlike for political ideology, we are unable to find evidence that judges take into account gender in their citation practices.

5. CONCLUSION

Studies of judicial voting patterns have cast doubt on the view of judges as independent decision makers. Using data on citation practices, we

24. Of our 98 sample judges, only 12 were racial minorities. We leave to future research the examination of the relationship between race and citation bias.

25. The fraction of citations to female judges is equal to one minus the fraction of citations to male judges. Thus, we do not perform a similar analysis for citations to female judges.

Table 12. Fraction of Outside-Circuit Citations to Judges Segmented by Gender

	N	Citations to Male Judge	Pre-1998 Opinions Authored by Male Judge	P
All opinions	3,072	.812	.819	.241
Male authored	2,370	.814	.817	.618
Female authored	702	.805	.824	.127

Note. The *P*-value is for a *t*-test of the difference in means between the fraction of citations to a male judge and the fraction of the pool of pre-1998 opinions authored by a male judge.

hope to have shed light not only on the processes by which judges reach biased outcomes but also on how bias may play into the creation of precedent. Judges tend to cite judges of the opposite political party significantly less often than would be expected from the fraction of the total pool of opinions attributable to judges of the opposite political party. The presence of biases in citations also suggests that we should view with suspicion attempts at ranking judges in terms of citation counts.

Our study helps distinguish those factors that lead to citation bias. If, for example, the bulk of biased citations were a product of simple partisanship (that is, Democrat judges simply prefer citing other Democrat judges), this bias should show up across the subject matter spectrum. In contrast, our study reports that judges are more likely to avoid citing judges of the opposite political party in opinions dealing with high-stakes subject matter (including our categories for campaign finance, rights, government actions, and capital punishment). These results support the view that bias is likely the product of the specific ideologies of the authoring judges. Future research should examine whether, consistent with the findings of Sunstein, Schkade, and Ellman (2004), there exist panel effects—that is, whether the composition of the panels (whether a panel is composed of all Democrats or of two Republicans and a Democrat) affects citation behavior and whether those patterns are also a function of subject area effects.

While judges seem prone to bias in high-stakes areas such as those in our rights category, we also found citation bias in our areas of federal business law and government actions that showed up at the bottom of our political salience measures. Our federal business law category, for example, includes securities regulation, an area in which judges are thought to find most issues mundane and are thought to be primarily

concerned with docket control (Grundfest and Pritchard 2002; Bainbridge and Gulati 2002; Sullivan and Thompson 2004). Further inquiry into this result might shed light on what drives bias in citations in relatively noncontroversial areas.

We also find that citation biases are more pronounced in cases in which there is a dissent, particularly a dissent from a judge of the opposite party. The presence of conflict seems to alter the reasoning behavior of judges: they reason in a more ideologically polarized fashion. Along the lines of Hettinger, Lindquist, and Martinek (2006), it would shed additional light on judicial behavior to examine whether these differentials in citation patterns also show up in other areas of conflict, such as when the appellate court is reversing a decision by a district court, and particularly when that reversal is of a decision by an ideologically different judge. One could also examine whether the patterns of citations in en banc cases, cases in areas of first impression, and cases with a circuit split are different from those in the more routine cases.

Judges tend to cite disproportionately those judges who cite them the most. We report evidence that this tendency to engage in citation club practices is greater for judges who graduated from less well represented and less traditionally elite law schools among our sample of judges. Moreover, weak evidence exists that the tendency to cite other judges is greater if the other judges graduated from the same law school. However, we report weak evidence that judges who are more independent from ideology are less likely to cite judges who cite them.

The bias we find is not all determinative. Judges often do cite judges of the opposite party, which indicates that constraints against a purely attitudinal approach to citations are binding on judges. Whether because of a concern about reversal or their reputation, judges cite judges of the opposite party frequently even in the subject matter areas we identify with the largest amount of citation bias (such as rights).

Our study expands on judicial voting studies in at least two ways. First, it provides a complement to these voting studies, demonstrating a bias in citation patterns within opinion reasoning. Bias extends not only to the outcome of a particular case but also to the rationale of the case. To the extent the impact of a case on future cases depends on not only the narrow outcome of a particular case but also the rationale behind this outcome, our study demonstrates that bias has an important effect on the substantive law.

Second, our study suggests that we can learn more about exactly how ideological biases affect judges through examination of citation practices

in ways unavailable through solely studying voting practices. Further examination of citation practices could provide scholars with a new method of measuring and understanding judicial biases, especially if the results from citation studies are juxtaposed with those from voting studies. Maybe judges who display biases in citation practices also display biases in voting, which would suggest that judges need to engage in biased reasoning so as to reach or support biased outcomes. Alternatively, maybe judges who engage in biased voting patterns are the least likely to engage in biased citation patterns, which might suggest that judges who are biased in voting also seek to cover their biases by disproportionately citing the opinions of judges from the opposite party as authority.

APPENDIX: DEFINITIONS

Table A1. Variable Definitions

Variable	Definition
Opposite_Party	For any specific opinion, the total number of outside-circuit citations to judges of the opposite political party (from the perspective of the judge in question) divided by the total number of citations to any outside-circuit judge in the sample
Opposite_Pool	Total number of opinions written by outside-circuit judges of the opposite political party (from the perspective of the judge in question) before 1998 divided by the total number of opinions written by outside-circuit judges in the sample before 1998
Year_Exp Chief Judge	Number of years that a judge has served as a federal circuit court judge (measured as of 1998) Indicator variable equal to one if the judge is the chief judge of the circuit at the time of the opinion and zero otherwise
Independence	The number of opposing opinions for which a particular judge opposed judges of the same political party divided by the number of all opposing opinions (the Actual Same Party Opposing Fraction) is calculated; the political party (as proxied by the party of the appointing president) of the other active judges on each circuit from 1998 to 2000 (including those who eventually gained senior status or retired) is determined to obtain the baseline fraction of same-party judges on the circuit (the Predicted Same Party Opposing Fraction); Independence is defined to equal the Actual Same Party Opposing Fraction minus the Predicted Same Party Opposing Fraction
Republican GHP	Indicator variable equal to one if the judge authoring an opinion is Republican and zero otherwise Measure of political preference for each judge based on the ideological preferences of the appointing president and relevant senators developed in Giles, Hettinger, and Peppers (2001); the GHP score ranges from -1 (most liberal) to +1 (most conservative)
Opposition	Indicator variable equal to one if the opinion is in opposition to the opinion of another judge in the same case and zero otherwise; in the case of a dissenting opinion written by the judge in question, the opinion is treated as in active opposition to the majority opinion; in the case of a majority opinion by the judge in question, active opposition exists if the majority opinion is opposed by a dissenting opinion
Majority_v_Dissent	Opposition situation in which the judge in question authors a majority opinion and another judge authors a dissent

Dissent_v_Majority	Opposition situation in which the judge in question authors a dissenting opinion and another judge authors the majority opinion
Opposite Party	Indicator variable equal to one if the judge writing an opposing opinion is of a different political party from the judge authoring the opinion in question and zero otherwise
Opposition_Same Party	Indicator variable equal to one if the opposition opinion involves a judge of the same political party and zero otherwise
Opposition_Opposite Party	Indicator variable equal to one if the opposition opinion involves a judge of the opposite political party and zero otherwise
Top5_Cites	Top five outside-circuit judges who cite the judge in question are identified (termed the “top five judges”); for any specific opinion, Top5_Cites is defined to equal the number of citations the judge in question makes to the top five judges divided by the total number of citations to all outside-circuit judges in the sample
Top5_Pool	Total number of opinions written by the top five judges before 1998 divided by the total number of opinions written by all outside-circuit judges in the sample before 1998
Top5_Same_Party	Ratio of the total number of opinions written by top-five judges before 1998 who are of the same party as the judge in question over the total number of opinions by top-five judges before 1998
Influential Judge	Indicator variable equal to one if the judge in question is one of the top five judges ranked by number of invocations as reported in Choi and Gulati (2004)—Posner, Easterbrook, Calabresi, Wilkinson, and Boudin—and zero otherwise
Less Well Represented School	Indicator variable equal to zero if the judge graduated from Harvard or Yale and one otherwise
Same School Fraction	Fraction of the top five judges who went to the same law school as the judge in question
Year_Exp_Differential	Absolute value of the difference between the years of experience on the federal circuit court of the judge in question and the mean years of federal circuit court experience for the top five judges of the judge in question
Top Salient	Indicator variable equal to one if an opinion’s subject matter falls into one of the top nine high-stakes subject matter categories (church and state, campaign finance, federalism, First Amendment, rights, government actions, capital punishment, administrative law, and takings and property)
Bottom Salient	Indicator variable equal to one if an opinion’s subject matter does not fall into one of the top nine high-stakes subject matter categories (tax, federal business law, environment, intellectual property, torts, immigration, criminal, labor, private law, and other)

Table A2. Subject Matter Categories

Category	Definition
Private law	Contracts, insurance, private arbitration, creditor versus debtor, lessor versus lessee, usury laws, franchise versus franchiser, employment contractual disputes, corporate law, piercing the corporate veil
Intellectual property	Patents, copyright, trademarks, Lanham Act (trademark-related actions)
Tax	Internal Revenue Code and other tax-related matters
Federal business law	Securities regulation, bankruptcy, antitrust, federal banking laws, unfair trade practices, Federal Debt Collections Act, Fair Debt Collection Practices Act, Truth in Lending Act, Deceptive Advertising under Lanham Act, Magnuson-Moss Warranty Act, and the like
Torts	Federal Tort Related Act, medical malpractice, products liability, wrongful death, libel, and the like
Criminal	Sentencing guidelines, prisoners rights, drugs and controlled substances, attorney-client privilege in criminal context, grand-jury-related issues, Racketeer Influenced and Corrupt Organizations Act (RICO), search and seizure (Fourth Amendment), Prison Litigation Reform Act; excludes capital punishment cases
Capital punishment	Capital-punishment-related actions
Labor	Employment issues (excluding employment contractual disputes), Employee Retirement Income Security Act (ERISA), National Labor Relations Board, Occupational Safety and Health Act, Fair Labor Standards Act, wrongful discharge, Labor Management Relations Act, Family and Medical Leave Act, employee benefits, Worker's Compensation claims, retaliatory discharge claims, and the like

Rights	Race discrimination, sex discrimination, Affirmative Action, civil rights, age discrimination, privacy, abortion, other individual rights
Government actions	Sovereign immunity, False Claims Act, government forfeiture action
Takings and property	Takings claims, zoning issues, property rights
Campaign finance	Campaign finance and any election-related issue
Immigration	Immigration-related issues
First Amendment	First Amendment issues; excludes church and state issues
Church and state	Establishment Clause, Pledge of Allegiance, funding for private religious schools, prayer in school, Ten Commandments
Environment	National Park Service; Clean Air Act; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Superfund; National Forest Management Act; Endangered Species Act; Environmental Protection Agency; and the like
Administrative law	Review of agency decision making (not in another subject matter category), Administrative Procedure Act, Federal Communication Commission rates, Federal Energy Regulatory Commission rates, Freedom of Information Act actions, Social Security entitlement, Medicare, and the like
Federalism	State rights, federal preemption, Commerce Clause power
Other	Indian law, maritime law, implicit private rights of actions, judicial process issues (judge recusal, attorney sanctions, legal malpractice, attorney-ethics-related actions), and the like

Table A3. High Salience Ranking of Subject Matter Categories

Category	Mentions	Mentions/ Opinions
Church and state	25	1.39
Campaign finance	27	1.17
Federalism	15	.94
First Amendment	47	.62
Rights	194	.43
Government actions	14	.35
Capital punishment	21	.28
Administrative law	26	.26
Takings and property	4	.19
Tax	12	.18
Federal business law	28	.13
Environment	5	.10
Intellectual property	5	.10
Torts	9	.09
Immigration	2	.04
Criminal	35	.03
Labor	10	.03
Private law	0	.00
Other	13	.12

Note. The total number of mentions is defined as the number of *New York Times* front-page articles that mention both the U.S. Supreme Court and the specific subject matter area between January 1, 1993, and December 31, 1997.

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