12-1-2006

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ESSAY

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*Stephen J. Choi & G. Mitu Gulati**

INTRODUCTION

Most view the ideal judge as a neutral and unbiased decision maker; the scales of justice are not supposed to tilt one way or the other. Judges are not supposed to come to cases with preconceptions that defendants of a particular race or ethnicity are guilty, securities fraud lawsuits are frivolous, or that tax fraud cases involve cheats. Recognizing this view of the ideal judge, candidates for judicial office tend to assert that they seek to do no more than to serve the public by applying the law. Invoking this ideal in his confirmation hearings, Chief Justice John Roberts described his self-conception of a judge's role as akin to an umpire calling balls and strikes.[1] Presumably this

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* Murray and Kathleen Bring Professor of Law, New York University and Professor of Law, Duke University, respectively. Thanks for comments to Scott Baker, Kimberly Krawiec, Richard Posner, and Un Kyung Park. Thanks to Christopher Kellett for assisting with data collection. Disclosure: one of the authors clerked for two of the judges in the sample (Alito and Lynch).

1 Associated Press, *Text of John Roberts' Opening Statement,* USATODAY.COM, Sept. 12, 2005, *available at* http://www.usatoday.com/news/Washington/2005-09-12-roberts-fulltext_x.htm. In his opening statement at his confirmation hearings Roberts said:

> Judges and justices are servants of the law, not the other way around. Judges are like umpires. Umpires don't make the rules; they apply them.
>
> The role of an umpire and a judge is critical. They make sure everybody plays by the rules.
>
> But it is a limited role. Nobody ever went to a ball game to see the umpire.

was the conception of a judge that Roberts thought would appeal to the public; the amount of press that the analogy received suggests that the strategy worked.[2]

The problem with the vision of the judge as baseball umpire is apparent if one talks to a skilled litigator. The litigator will tell you that a key element of preparing a case is figuring out a judge's biases and playing to them.[3] Judicial preconceptions and biases are among the key determinants in a case's outcome, if not the key determinant. No judge (we hope) holds such a strong preconception that all defendants of a particular race or ethnicity are guilty or that every securities fraud lawsuit is frivolous. But judges may not come to every case with a neutral mindset either. A judge may believe that a majority of securities claims are in fact frivolous, coloring how she views any particular securities case before the court. We confront the question of how best to create accountability for biases while still allowing for judicial independence; that is, how to get these biased umpires to behave in the neutral fashion to which they tell us they aspire.

Politicians select federal judges. And despite the constant political rhetoric from both political parties that their selections are meritorious and true to the rule of law (or some such amorphous concept that is supposed to represent neutrality), politicians seem to pick judges who vote not neutrally, but in line with the ideology of the politicians picking them. Empirical literature in political science reports that political affiliation serves as a remarkable predictor of how a judge will vote in a particular case.[4] The more ideologically

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Id. For criticism of Roberts's umpire analogy see Edward M. Kennedy, *Roberts and Alito Misled Us*, WASH. POST, July 30, 2006, at B1.

2   The headline to the CNN Report on Roberts's statement during his nomination hearings was *Roberts: My Job Is To Call Balls and Strikes and Not To Pitch or Bat*, CNN.COM, Sept. 12, 2005, http://www.cnn.com/2005/POLITICS/09/12/roberts .statement/index.html; *see also* Lorraine Woellert, *No One's Kicking Dirt on "Umpire" Roberts*, BUS. WK. ONLINE, Sept. 13, 2005, http://www.businessweek.com/bwdaily/ dnflash/sep2005/nf20050913_4305_db016.htm. More humorously, see Jack Shafer, *How the Court Imitates the World Series: John Roberts' Winning Baseball Analogy*, SLATE, Sept. 13, 2005, http://www.slate.com/id/2126241/.

3   *Cf.* Ahmed Taha, How Litigants Respond to Judges' Political Orientations: An Empirical Analysis (October, 2006) (unpublished manuscript, on file with authors) (finding that judges' political orientations have significant effects on the number of cases filed by plaintiffs).

4   *See* ROBERT A. CARP & CLAUDE K. ROWLAND, POLICYMAKING AND POLITICS IN THE FEDERAL DISTRICT COURTS 25–81 (1983); Lee Epstein & Jack Knight, *Toward a Strategic Revolution in Judicial Politics: A Look Back, A Look Ahead*, 53 POL. RES. Q. 625, 639 (2000); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997); Cass R. Sunstein et al., *Ideological Voting on Federal Courts of Appeals: A Preliminary Investigation*, 90 VA. L. REV. 301 (2004).

charged the court case, the better the predictive model works.[5] Prior studies nonetheless have predominantly ignored bias in citations or, more broadly, judicial reasoning.[6] The perspective of these studies also tends to be relentlessly positive—they study what is happening, without seeking to influence it.[7] In this Essay, we propound two innovations to the study of judicial bias. First, we go beyond the prior studies of voting behavior and introduce a new measure of judicial bias based on citation practices. Second, we advocate a normative perspective, arguing that scholars studying the courts should not only endeavor to identify bias, but also to mitigate bias.

Why look at bias in citations when existing studies already demonstrate bias in how judges vote in judicial decisions? Judges do more than vote. They offer reasoning for their decisions and that reasoning is integrated into the body of precedent that in turn influences the outcomes of subsequent cases. Examining citation patterns—given the integral role citations play in the construction of legal arguments in our system—furnishes a method of analyzing bias in judicial reasoning patterns beyond vote analysis. A study of bias in judicial citations allows testing of how judges reason and create precedent for future

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5   *See* Sunstein et al., *supra* note 4, at 306–07.

6   Among the exceptions with respect to the analysis of citations are Charles A. Johnson, *Follow-Up Citations in the U.S. Supreme Court*, 39 W. POL. Q. 538 (1986); Michael Abramowicz & Emerson H. Tiller, *Judicial Citation to Legislative History: Contextual Theory and Empirical Analysis* (Northwestern Univ. Sch. of Law, Law & Econ. Research Paper Series, Research Paper No. 05-11, 2005), *available at* http://ssrn.com/abstract=725919. Johnson reports that ideology does not drive the citation patterns in his sample of Supreme Court citations to the Court's own past opinions. Johnson, *supra*, at 542–43. Nonetheless, precedent should largely drive the choice of citations to the Supreme Court's own past decisions. Any political bias in judicial citations may become obscured by the importance of precedent in Johnson's study. Abramowicz and Tiller look at judicial citations to legislative history, reporting that opinions cite Republican-generated legislative history more frequently where the deciding panel of federal circuit court judges is comprised primarily of Republican-appointed judges. Abramowicz & Tiller, *supra* (manuscript at 17). Nonetheless, because judges will cite to legislative history when interpreting a specific statute, the range of possible history to which to cite is limited. Bias may appear, but again only in limited form in such a study. More broadly, there have also been some attempts to examine other reasoning techniques, such as the use of ostensibly neutral canons of statutory construction, for the presence of bias. *See* James J. Brudney & Corey Ditslear, *Canons of Construction and the Elusive Quest for Neutral Reasoning*, 58 VAND. L. REV. 1, 53–69 (2005).

7   For a discussion of the two divergent strains in the study of judicial behavior, the positive strain (out of political science) that looks to study what judges do without trying to influence it and the normative strain (out of the legal academy) that looks to tell judges what they should do without much understanding of how judges actually do things, see Barry Friedman, *The Politics of Judicial Review*, 84 TEX. L. REV. 257 (2005).

judges to follow. Not only does such a study complement the study of bias in judicial voting patterns, but the study may indicate the presence of different forms of bias in judicial behavior. Judges, for example, may shy away from openly opposing their peer judges in a particular case but instead, engage in opposition through their opinion reasoning. More perversely, judges who wish to appear unbiased in more visible activities (such as voting on particular cases) may use this appearance as "cover" to engage in subtle attempts to shift the underlying doctrine toward their own viewpoint through their reasoning within opinions.

Once measures of judicial bias are developed, such measures not only may afford us insight into how bias affects judges but also may be used to moderate the overall level of bias among judges. We cannot directly regulate judicial behavior without compromising judicial independence. But we can make the presence of judicial bias more transparent. Utilizing measures of judicial bias, researchers may rank individual judges in terms of their biases, thereby setting up a competition among the judges in terms of bias. Judges care about status and that status is a function of public perception and respect.[8] More specifically, judges care about fulfilling their roles as neutral decisionmakers, even if hidden in their reasoning patterns are tendencies to favor particular, narrowly-held ideological viewpoints.[9] In addition

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8 *See* LAWRENCE BAUM, THE PUZZLE OF JUDICIAL BEHAVIOR 47–55 (1997); Sidney A. Shapiro & Richard E. Levy, *Judicial Incentives and Indeterminacy in Substantive Review of Administrative Decisions*, 44 DUKE L.J. 1051, 1058 (1995) (noting that judges desire to be viewed positively by "fellow jurists, lawyers and the public").

9 Both interviews of judges and judicial biographies suggest that judges care about "reaching decisions through what feel to them like professionally legitimate methods." Stefanie A. Lindquist & David E. Klein, *The Influence of Jurisprudential Considerations on Supreme Court Decisionmaking: A Study of Conflict Cases*, 40 LAW & SOC'Y REV. 135, 137 (2006). The following quote from Judge Posner is illustrative of the myriad constraints judges perceive:

> THE SUPREME COURT is a political court. The discretion that the justices exercise can fairly be described as legislative in character, but the conditions under which this "legislature" operates are different from those of Congress. Lacking electoral legitimacy, yet wielding Zeus's thunderbolt in the form of the power to invalidate actions of the other branches of government as unconstitutional, the justices, to be effective, have to accept certain limitations on their legislative discretion. They are confined, in Holmes's words, from molar to molecular motions. And even at the molecular level the justices have to be able to offer reasoned justifications for departing from their previous decisions, and to accord a decent respect to public opinion, and to allow room for social experimentation, and to formulate doctrines that will provide guidance to lower courts, and to comply with the

to public perception, judges may care about their chances at promotion to a higher court.

If researchers demonstrate that certain judges are making decisions in what looks to be a systematically biased fashion whereas other judges are not, we venture that the judges who are revealed as more biased will take steps to reduce the level of bias in their decisionmaking. Put crassly, we propose to harness the power of competition (here, judges caring about their relative rankings in terms of bias with other judges) to produce less biased judging. Our premise is that judges, like the rest of us, are concerned about rankings and respond to incentives.[10] Many of these individuals played the political and public perception game exceptionally well, overcoming a host of other candidates to gain appointment or election as judges in the first place. That suggests that judges are likely more competitive and more concerned about public perceptions (and capable of effectively managing those perceptions) than the ordinary individual. There are exceptions, such as the judges who care only about dispensing justice and not about public perceptions, who will not respond to the incentives created by a tournament based on the level of judicial bias. But these are the handful of judges who are presumably unbiased in any event.

This Essay proceeds as follows: We survey in Part I the prior literature on ranking judicial performance using citation counts. In Part II, we discuss why there is value in the examination of biases in citation counts. In Part III, we report our preliminary attempt to rank judges in terms of their relative bias levels and to adjust citation counts for possible bias.

I. BACKGROUND ON RANKINGS AND CITATIONS

Ranking judges in terms of citation counts is not new. Scholars have been utilizing citation counts to evaluate judicial performance for over three decades. Some of the most prominent studies in this vein have originated from judges themselves. Judge Richard Posner

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expectations of the legal profession concerning the judicial craft. They have
to be seen to be doing law rather than doing politics.

Richard A. Posner, *The Anti-Hero*, NEW REPUBLIC, Feb. 24, 2003, at 27, 30.

10   On the question of whether judges respond to incentives, see RUSSELL SMYTH, *Do Judges Behave as* Homo Economicus, *and If So, Can We Measure Their Performance? An Antipodean Perspective on a Tournament of Judges*, 32 Fla. St. U. L. Rev. 1299, 1302–07, 1325–29 (2005); *see also* Ahmed E. Taha, *Publish or Paris: Evidence of How Judges Spend Their Time*, 6 AM. L. & ECON. REV. 1 (2004) (finding evidence suggesting that the judicial behavior with respect to publication choices is a function of both budget constraints and incentives).

used citation counts in his attempts to quantify judicial greatness in his biographies of Learned Hand[11] and Benjamin Cardozo.[12] Judge Frank Easterbrook employed citation counts to do the converse and determine the "most insignificant" Supreme Court Justice.[13] In general, scholars have exploited citation counts to render relative evaluations of judicial performance for a variety of purposes, including the determination of relative influence levels of various judges,[14] the relative fitness for promotion to the U.S. Supreme Court of these judges,[15] the quality of ABA evaluations of judicial candidates,[16] the impact of prior experience in academia on judicial performance,[17] and the relative influence levels of the various federal circuit courts.[18]

Recently, citation studies, previously the province of academic debate, shifted to the realm of the national media during the debates over who should be the next two Justices on the Supreme Court. Discussions of these quantitative analyses of judicial performance, and specifically the use of citations to rank judicial performance, found their way into the *New York Times*, the *Washington Post*, the Fox News Channel, and *Legal Affairs*, among others.[19] Such rankings were especially salient in the context of candidates such as Judge Alito, who had spent more than fifteen years as a federal circuit court judge prior to his nomination to the High Court. Using the abundant data on his

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11   *See* Richard A. Posner, *The Learned Hand Biography and the Question of Judicial Greatness*, 104 YALE L.J. 511, 534–40 (1994).

12   *See* RICHARD A. POSNER, CARDOZO 74–91 (1990).

13   *See* Frank H. Easterbrook, *The Most Insignificant Justice: Further Evidence*, 50 U. CHI. L. REV. 481, 495–96 (1983).

14   *See* David Klein & Darby Morrisroe, *The Prestige and Influence of Individual Judges on the U.S. Courts of Appeals*, 28 J. LEGAL STUD. 371 (1999); William M. Landes et al., *Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges*, 27 J. LEGAL STUD. 271 (1998); Russell Smyth, *Who Gets Cited: An Empirical Study of Judicial Prestige in the High Court*, 21 U. QUEENSLAND L.J. 7 (2000); Russell Smyth & Mita Bhattacharya, *What Determines Judicial Prestige? An Empirical Analysis for Judges of the Federal Court of Australia*, 5 AM. L. & ECON. REV. 233 (2005).

15   *See* Stephen J. Choi & G. Mitu Gulati, *Choosing the Next Supreme Court Justice: An Empirical Ranking of Judge Performance*, 78 S. CAL. L. REV. 23, 48–61 (2004).

16   *See* James Lindgren, *Examining the American Bar Association's Ratings of Nominees to the U.S. Courts of Appeals for Political Bias, 1989–2000*, 17 J.L. & POL. 1 (2001); John Lott, *The Judicial Confirmation Process: The Difficulty in Being Smart*, 2 J. EMPIRICAL LEGAL STUD. 407, 437 (2005).

17   *See* Tracey E. George, *Court Fixing*, 43 ARIZ. L. REV. 9, 59 (2001).

18   *See* Landes et al., *supra* note 14, at 302–05 (providing an analysis of the relative influence of different federal circuit courts).

19   *See* John Lott, Op-Ed., *Pulling Rank*, N.Y. TIMES, Jan. 25, 2006, at A21; Richard Morin, *He's Number 16!*, WASH. POST, Jan. 15, 2006, at B6; *Supreme Stats*, LEGAL AFF., Sept.–Oct. 2004, at 32; Mike Moller, *Mr. Smith Locks Up Washington*, FOX NEWS.COM, Apr. 15, 2005, http://www.foxnews.com/story/0,2933,153120,00.html.

performance while on the lower court, the public could evaluate Alito relative to other potential candidates for the Court who had also been circuit judges for some meaningful period of time. Indeed, a key reason behind the pressure for President George W. Bush's prior nominee to the Supreme Court, Harriet Miers, to withdraw was that there was little basis upon which her fitness for the Court could be evaluated (she had never been a judge).[20] By contrast, there existed a treasure trove of information regarding Judge Alito's performance as a judge so that his performance could be evaluated relative to his peers.[21] Among the various aspects of Judge Alito's performance that received attention were his citation counts.[22]

The project of constructing objective measures of judicial performance is important for a variety of reasons. Judicial behavior is generally difficult for the public to evaluate. Politicians from both leading parties routinely claim that their favored judicial nominees are objective and not unduly political or partisan. With reliable and objective measures of basic judicial performance, we could evaluate and possibly challenge such claims put forward by the politicians. In addition, these measures may be used in deciding judicial promotions to higher courts, as a source of public pressure on the judges to do better, and as a means of identifying those judges who should be urged to retire.

One threshold problem that many of the studies using citation counts have not considered in depth is the potential for bias in citations.[23] If, however, these measures are biased—and we provide pre-

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20   See Art Buchwald, The Alito Option Play, WASH. POST, Nov. 8, 2005, at C3 ("Since Judge Samuel Alito has been sitting on the U.S. Court of Appeals for fifteen years, it is much easier to know where he stands on the constitutional issues that are racking this country right now. Harriet Miers had no paper trail and that is why the right and the left both opposed her and forced her to withdraw her nomination.").

21   See id.

22   See Morin, supra note 19 (reporting on a citation study on Alito and other federal circuit judges by Stephen Choi and Mitu Gulati). Other aspects of Alito's past judicial opinion paper trial also made the popular press. The New York Times reported on the pattern of Alito's dissenting opinions, as did the New Republic. See, e.g., Adam Liptak & Jonathan D. Glater, Alito's Dissents Show Deference to Lower Courts, N.Y. TIMES, Nov. 3, 2005, at A1 (referencing separate studies by Frank Cross and Cass Sunstein); Cass R. Sunstein, The Key Question for Alito. Same Difference, NEW REPUBLIC ONLINE, Jan. 9, 2006, http://www.tnr.com/doc.mhtml?i=w060109&s=sunstein010906.

23   See Klein & Morrisroe, supra note 14, at 387–88 (finding insignificant evidence of bias in invocations); Landes et al., supra note 14, at 325 (finding insignificant evidence of bias in citations); Russell Smyth & Mita Bhattacharya, The Determinants of Judicial Prestige and Influence: Some Empirical Evidence From the High Court of Australia, 30 J. LEGAL STUD. 223 (2001) (using citation counts as a measure of influence for Australian judges and reporting that the Conservative judges tend to receive more citations

liminary evidence that bias does exist—what does one do? One response is to condemn all attempts to measure judicial performance or quality using citation counts as doomed to failure.[24] We urge an alternative perspective: discovery of bias may be a boon rather than a curse. If there is bias, then this finding has the potential to unearth a wealth of information to be exploited both to rank judges based on bias and to affect judicial behavior in order to reduce the incentive to engage in biased decisionmaking. In the remainder of this Essay, we explore the value of measuring the degree of citation bias demonstrated by individual judges and introduce a sample ranking of judges according to citation bias.

II. The Value to Unearthing Citation Biases

What exactly is judicial bias and how does this relate to studying bias in citation practices? Judges (together with their clerks) make the decision to cite particular cases based on a number of different motivations. A judge may cite a particular opinion because it contains precedential value, particularly for opinions from a court within the same circuit as the judge. Judges may also cite opinions for their reasoning, insightfulness, and ability to bolster the judges' own views. Citations may also occur more frequently to judges with whom a particular judge feels greater affinity based on friendship, past shared experiences, and so on.

Given this panoply of reasons to cite another opinion, we need caution in defining judicial bias (and even here, it is not clear that all bias is bad). We focus primarily on whether political bias exists in how judges engage in citation practices. One problem with focusing on political bias is that judges are supposed to have an ideology. A judge may cite a particular subset of other judges because they espouse a similar view on judicial restraint. Or judges may hold a common view on how to interpret the scope of religious freedoms. It is not clear that the foregoing citation rationales are "bad." Nonetheless, there are at least three reasons why unearthing citation biases and ranking judges based on those biases could add value.

First, determining how much political ideology and the precise type of ideology that affects a judge's opinions provides not only

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than Labor appointees). The Klein & Morrisroe, Landes et al., and Smyth & Bhatta-charya studies look at the aggregate number of citations a particular judge receives and do not look at how a judge decides when to cite another opinion on a case-by-case basis.

24   Many of those in legal academia providing comments for our project in assessing bias in judicial citations made this observation.

insight into how a judge thinks but also transparency. The empirical literature on judicial bias has almost exclusively focused on measuring bias in case outcomes (that is, bias in voting as opposed to reasoning).[25] Unlike prior studies focusing on voting behavior, our method of measuring bias through citations gets us closer to being able to measure bias in the construction of precedent. Second, others have used citation counts as an independent measure of the "quality" of a judge.[26] The theory behind this quality measure is that other judges cite a particular judge because of the high value of her opinion. But if citations instead occur because of ideology or some other reason besides the high value of the opinion, then this undermines the value of using citation counts as a measure of quality. If citation counts are biased, then the next step in the project of improving existing measures of judicial performance should be to de-bias those counts. Third, the measurement of bias has the potential to alter judicial behavior in a fashion that improves the judicial decisionmaking process. If judges know their behavior is being scrutinized for signs of bias, then they will exercise more self-scrutiny for signs of bias—particularly where the bias involves narrowly-held ideologies that judges are reluctant to publicize.

A.   The Importance of Measuring Judicial Bias

Judges who act based on ideology in their citation practices may not necessarily pose a problem. Some judges may cite the same group of judges because they value the particular judicial philosophy of this group of judges. It is the rare judge who does not hold a jurisprudence in how to decide court decisions. Nonetheless, we can divide ideologies into widely-held and narrowly-held ideologies. 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. Few judges like to appear as lacking in impartiality, a widely-held goal of judging. As a result, judges may make decisions based on 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 based on judicial restraint is one thing. Referring to judicial restraint while deciding based on more narrowly-held political beliefs is another thing.

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25   See Abramowicz & Tiller, *supra* note 6 (manuscript at 9–12) (describing the existing literature on judicial bias and the focus on the analysis of voting behavior— the Abramowicz & Tiller study being among the handful of exceptions).

26   See *supra* notes 11–18 and accompanying text.

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 decisionmaking. Judges would prefer that outsiders believe that their decisions are decided based on broadly-held philosophies based on judicial restraint, social welfare, impartiality, and so on. But if their opinions consistently contain reasoning that refers to citations from a specific subset of judges all holding the same narrowly-held ideologies, one can wonder what is really driving the judges' decisions. Uncovering the importance of political affiliation provides transparency in just how much political bias matters. Such transparency can be useful in evaluating a judge for a higher position, such as U.S. Supreme Court Justice. If a judge displays a prominent tendency to side with judges of the same political party for all types of decisions, one can wonder whether the judge was selected for her fair-mindedness, intelligence, and so on or, in the alternative, was selected because she passed a political litmus test.

Evidence on bias in citations also has the potential to shed light on circuit norms. Commentators have observed that the different circuits appear to develop varying norms of behavior (e.g., publishing a large number of opinions, hearing oral arguments infrequently, dissenting a lot).[27] These norms, to the extent they are present, should also appear in citation data. For example, other things equal, we might find that judges on certain circuits tend to cite proportionately from judges of both political parties whereas judges on other circuits might tend to display more bias in their citation practices.

One challenge in measuring judicial bias is the matter of quantifying the extent of bias. Thus far, scholars seeking to measure bias have looked primarily at voting behavior.[28] For example, judges voting in favor of plaintiffs seeking to have evidence excluded in Fourth Amendment challenges to a police search may be coded as liberal and those voting the other way may be coded as conservative. Similarly, judges voting in favor of allowing the state to endorse religious symbolism (for example, allowing a creche or a nativity scene to be placed in a federal court house) may be coded as conservative and those voting against it as liberal. Bias in voting can also be measured as a function of dissenting votes. Judges who only dissent against others from the opposite political party may be seen as more partisan or biased

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27   *See* Stefanie Lindquist, *Bureaucratization and Balkanization: The Origins and Effects of Decision Making Norms in the Federal Appellate Courts*, 41 U. Rich. L. Rev. (forthcoming 2007).

28   *See supra* note 4 and accompanying text.

than those who dissent equally against judges from both party backgrounds.

There is, however, a limitation on vote-based measures of judicial bias. Voting on individual cases comprises only part of what judges do in a case. Judges also promulgate written statements of reasons for their decisions and those opinions, in turn, become part of the body of precedent that influences later cases. Examining voting patterns alone provides an incomplete measure of what judges are doing because it focuses only on the judge's preferences in the current case. Put differently, one is only measuring the presence of bias vis-à-vis the current case. But, at least at the appellate level, the current case is rarely the sole focus of judges. Instead, their concern is often with the creation of precedent that will influence later cases.

Bias may also more readily reveal itself in citations and the creation of precedent than in judicial voting patterns. How a judge votes is visible and subject to immediate public scrutiny; how a judge reasons within an opinion is more obscure to the general public. Reading and digesting the reasoning of a particular opinion takes effort and expertise, not only in understanding legal reasoning but also in connecting how one case interacts with the line of prior cases in a particular area of the law. A judge, for example, might vote to allow for a certain piece of evidence to be excluded under the Fourth Amendment because the police behaved in a horrendous manner, but might then also write her opinion in a fashion that permits the police in the future to engage in highly invasive searches and seizures with no more than minimal justification. A vote-based coding would count such an outcome as liberal because it would be ignoring the information contained in the creation of precedent. Focusing only on the votes, as in prior studies, misses what judges on courts like the federal circuit courts and the U.S. Supreme Court see as a primary task, that of the creation of precedent, and the bias involved in this effort.[29]

To summarize, looking at citation bias provides a step toward bridging the gap between the vote counting (political scientists) and precedent reading (legal academics). The analysis of citation patterns, we suggest, provides a numerical method of examining judicial reasoning patterns for bias.

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29 For a detailed exposition of this point, see MICHAEL GERHARDT, THE PRISM OF PRECEDENT (forthcoming 2007).

B.   De-Biasing Citation Counts

Determining the amount of political (and other) bias that affects citation practices is also important in validating a practice common among researchers: using citation counts as a measure of a particular judge's "quality." The premise behind using citation counts to measure judicial quality is that judges choose to cite the opinions of other judges when they think that the discussions of a particular point by those other judges will support or illuminate their reasoning.[30] In other words, well-reasoned opinions will get cited and badly reasoned opinions will get ignored. Judges who write higher quality opinions— where the proxy for opinion quality is the quality of reasoning—will, over significant periods of time, systematically accumulate higher numbers of citations than those who write lower quality opinions. The measure will not be perfect because badly reasoned opinions will sometimes get a lot of cites because they happen to be the first ones to analyze a particularly salient issue and well-reasoned opinions will sometimes get ignored because they tackle obscure topics.[31] Over long enough periods of time, assuming that judges all tackle a similar variety of issues, these subject matter differences should even out.

Citation counts as a measure of judicial quality suffer from an understudied flaw: bias. Instead of the well-reasoned opinions being cited more frequently, perhaps judges primarily cite their social acquaintances, those who attended the same law schools that they did, or those of the same race and gender. Perhaps judges tend to cite those who share their political leanings or judges with longer tenure who have already established reputations. Concretely, if Richard Posner's citations primarily come from other Republican judges and if those other judges primarily cite Richard Posner because he is also a Republican judge, then a count of Richard Posner's citations would not be measuring the quality of his opinions. Instead, it would be

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30   For a discussion on the value of using citation counts as a measure of judicial influence or quality see Landes et al., *supra* note 14, at 271–72.

31   In addition, there is the issue of whether some badly reasoned opinions get cited a lot because others are distancing themselves from the bad opinion. Negative citations are not the same as positive citations. In a prior study, we ranked federal circuit court judges based on their citation counts (looking at the aggregate number of citations to each judge's top twenty citation-receiving opinions). We then looked at the top ten judges in terms of citation counts and determined what fraction of the citations to their top twenty citation-receiving opinions constituted negative citations. Not only did we find that negative citations comprised only a small fraction (8.9%) of the total citations, we also found that there was no significant difference between the fraction of negative citations for the top ten judges and the median eleven judges in our sample. *See* Choi & Gulati, *supra* note 15, at 56–57.

measuring his Republicanism. And comparing Richard Posner's cita-
tion counts to those of his Seventh Circuit colleague, Frank Easter-
brook, would arguably be measuring their relative Republican
credentials, rather than the relative quality of their opinions. In sum,
there is an array of ways in which citation counts might be biased. If
citation counts measure bias rather than quality of reasoning, that sug-
gests a flaw in the studies that have used these counts to measure judi-
cial quality or reputation.

Recognizing that bias may exist in the form of what cases a judge
chooses to cite to support her legal reasoning gives scholars the ability
to correct their existing citation counts for such bias. If the data on
citation counts can be adjusted for bias, then the clean data should
provide a good measure of opinion quality. To go back to the Posner
example, maybe what we need to do is to measure only the citations to
Posner by Democratic judges. If it turns out that Democratic judges
cite Posner more than they cite any other judge, that may indicate
something significant (for example, despite the fact that the Demo-
crats may not agree with his political views, they still find the quality of
his reasoning compelling enough that it is useful to cite him). Or
maybe one could look at his cites in relatively apolitical areas like tax
law; if he gets a lot of cites in those cases, we might be able to say
confidently that Posner's high citation counts are not due to political
factors. To reiterate, once we identify the presence of various biases,
we may use this information as a starting point from which we can
begin de-biasing the data to provide accurate measures of judicial
performance.

C.   The Games that Judges (May) Play

The two points made previously, about quantifying the presence
of bias generally among judges and debiasing citation counts as a mea-
sure of judicial quality, are important. But they are but the building
blocks for the normative point that our Essay advances. The judicial
system would benefit if judges are forced to think about the question
of whether they are biased and are given incentives to alter their
behavior toward reducing biases that they otherwise would not want
widely known to the public. Judges may not mind if they are ranked
highly in terms of espousing widely (but perhaps not universally) held
ideologies, such as judicial restraint. On the other hand, citation bias
rankings may reveal that a judge tends to cite a subset of other judges
known for their particular, narrowly-held ideological views on abor-
tion or some other hot button issue. Once judges realize that their
previously covert, narrowly-held ideological or other biases will lower

their standing relative to other judges and the general public (in turn reducing the judges' chances at promotion to a higher court), such judges may engage in less biased judicial reasoning and citation practices. More benignly, judges may simply not realize the extent to which they exhibit certain biases; awareness, in turn, may help alleviate the influence of the biases.[32]

Ranking judges based on judicial bias in citation practices also benefits those who seek to use citation count measures as a proxy for judicial quality. One critique of using citation counts as a proxy for quality is that it will negatively affect judicial behavior. Judges will start paying attention to which opinions they cite and will henceforth cite more frequently to their friends, family and political affiliates (in an effort to receive reciprocal citations to boost their own citation counts). If judges do indeed pay attention to citation count rankings and alter their behavior in response—as these critics, some of whom are prominent judges,[33] seem to assert they will—one solution is to

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32 The point that increasing accountability can reduce bias is backed up by a large body of literature, much of it pioneered by Philip Tetlock. The basic finding is that self-critical thinking is most likely to be activated where "(a) suboptimal performance result[s] from lack of self-critical attention to the judgment process and (b) improvement require[s] no special training in formal decision rules, only greater attention to the information provided." Jennifer S. Lerner & Philip E. Tetlock, *Accounting for the Effects of Accountability*, 125 PSYCHOL. BULL. 255, 263 (1999). The necessary self-critical thinking will take place where the accountability is to an "audience (a) whose views are unknown, (b) who is interested in accuracy, (c) who is interested in processes rather than specific outcomes, (d) who is reasonably well-informed, and (e) who has a legitimate reason for inquiring into the reasons behind participants' judgments." *Id.* at 259. As political scientist David Klein points out (in reference to Tetlock's work), "if we consider the conditions under which accountability has the best chance of reducing cognitive errors, they appear to be satisfied by the typical judging experience." David E. Klein, *Unspoken Questions in the Rule 32.1 Debate: Precedent and Psychology in Judging*, 62 WASH. & LEE L. REV. 1709, 1718–19 (2005). Accountability though is not a panacea and Lerner and Tetlock caution that "when people perceive accountability as illegitimate, such undesired effects as attitude polarization away from the advocated position, decline in intrinsic motivation, and excessive stress are all possible responses." Lerner & Tetlock, *supra*, at 259.

More broadly, on the point about accountability helping to reduce bias, see Evan R. Seamone, *Judicial Mindfulness*, 70 U. CIN. L. REV. 1023, 1071–77 (2002) (contending that awareness of certain biases may reduce the influence of such biases on judicial decisionmaking); Philip E. Tetlock, *Accountability and the Perseverance of First Impressions*, 46 SOC. PSYCHOL. Q. 285, 290–91 (1983) (finding that expectations of accountability may increase a juror's level of attention).

33 *See* Jay S. Bybee & Thomas J. Miles, *Judging the Tournament*, 32 FLA. ST. U. L. REV. 1055, 1068–73 (2005); William P. Marshall, *Be Careful What You Wish for: The Problems with Empirical Rankings as a Method to Select Supreme Court Justices*, 78 S. CAL. L. REV. 119, 132–34 (2004); Bruce M. Selya, *Pulling from the Ranks?: Remarks on the Pro-*

measure those responses. Put differently, the project of measuring judicial quality using citation counts can only be sustained if there is also a simultaneous project of measuring bias in citations. That second project of seeking to detect bias in citation behavior will deter judicial game-playing as a response to the first project of using citation counts as a measure of quality.

A ranking based on bias in judicial citations is not without flaws. Some judges intent on ruling based on certain preconceived ideological positions, but wanting to show themselves as unbiased, may continue to rule according to their preferences, but without as many citations. Nonetheless, such opinions standing alone with less citation support will be diminished in their precedence and influence.[34] Judges who take the route of citing fewer opinions naturally limit their impact on the greater judicial community and legal doctrine.

Certainly, to the extent measures of bias themselves are erroneous, judicial behavior may be swayed in the wrong direction. But assuming that good measures of bias can be produced, the publication of rankings based on these measures has the potential to alter and improve judicial behavior in a positive fashion. Demonstrating that the aggregate data reveal bias might well cause judges to be more self conscious about the possibility of bias, particularly if the ideology behind the bias that is revealed is not widely-held or one that others believe judges should espouse. This self-consciousness in turn may result in less of this type of narrowly-held bias overall. Measures of bias need not be exact. Even measures that rank judges with some degree of accuracy will provide judges an incentive to reduce the influence of narrowly-held ideologies in their decisionmaking (albeit not with as high powered incentives as with a completely accurate proxy for bias).

III. PRELIMINARY EMPIRICAL RESULTS

To illustrate our point on ranking judges based on bias we provide an example of how to rank judges according to political bias. We also report results from one method of de-biasing citation count data.

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posed Use of an Objective Judicial Ranking System to Guide the Supreme Court Appointment Process, 32 FLA. ST. U. L. REV. 1281, 1295–96 (2005); Lawrence B. Solum, A Tournament of Virtue, 32 FLA. ST. U. L. REV. 1365, 1395–99 (2005).

34 Exceptions are possible. Some judges, such as Judge Posner, are known for writing opinions using minimal numbers of citations and nonetheless are cited frequently for their reasoning. Few, however, have the stature of Judge Posner.

Our dataset consists of judicial opinions authored by federal circuit court judges from 1998 to 1999, for two years worth of data.[35] We consider only federal circuit court judges still active as of May 2003 when we started to compile our dataset, giving us ninety-eight federal judges and 6348 authored opinions. We limit our sample to citations from 1998 and 1999 opinions authored by the pool of ninety-eight federal circuit judges to any opinions written by a judge from the *same* pool of judges. For each judge, we use the party of the president who nominated the judge as a proxy for the judge's political party.

A. Ranking Judges Based on Bias

Consider when Judge A cites to a Republican judge. How do we know whether the citations to Republican judges are driven by bias or some other motivation? Perhaps Judge A cites to a Republican judge simply because the pool of available opinions to which Judge A may cite are mostly authored by Republican judges.

We therefore develop a control for the pool of available opinions to which a judge may cite. For each judge, we calculate the pool of citations from the pool of active judges and its relative composition of Republican- and Democratic-judge authored opinions. For example, we compare the frequency of Judge A's citations to Republican judges with the fraction of the total pool of opinions to which Judge A could have cited that is comprised of opinions written by Republican judges. So if Republican-judge authored opinions consist of fifty percent of the available pool of opinions and Judge A's actual citations to Republican judges consist of seventy-five percent of Judge A's total citations then this provides evidence that Judge A favors Republican judges.

Controlling for discrepancies in the age of opinions is important in the comparison between actual citations and the pool of citations. Suppose we were to compare citations by a judge today to another contemporaneous judge and a judge from the nineteenth century. In such a case, one could not weigh equally every opinion of the contemporaneous judge and the nineteenth-century judge. Very few of the nineteenth century judge's opinions, if any, will still have any relevance today. Each of the contemporaneous judge's opinions is more likely to be cited than the nineteenth-century judge's opinions.[36] Looking at only the opinions of active federal circuit court judges (and the citations to this same pool of judges) gives us a cohort of

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35   *See* Choi & Gulati, *supra* note 15, at 32.

36   On the depreciation of an opinion's citeworthiness, see Tom Smith, *The Web of Law* 35–36 (Univ. of S.D. Sch. of Law, S.D. Legal Studies Research Paper No. 06-11, 2005), *available at* http://ssrn.com/abstract=642863.

judges where the discrepancies in the age of opinions to which judges may cite are not great (from a relative perspective). Limiting our sample to only active judges creates a relatively level playing field in assessing citation patterns for different judges.

We code for whether a judge cites to judges who are of a different political party. We limit our citations to citations to outside circuit opinions. Citations to inside circuit opinions are often driven by precedent and give judges less leeway to cite according to their preferences. We obtain 3072 opinions in our dataset where a judge cites to at least one outside circuit judge in our sample of ninety-eight active federal circuit court judges. To construct an initial political bias indicator, we compute the difference between the actual mean fraction of citations to a different political party in a particular judge's opinions (Opposite_Party) and the pool of opinions authored by opposite political party judges as a fraction of the pool of all opinions (Pool_Opposite). Under this measure of political bias, a score closer to zero indicates a judge more neutral in her citation patterns. Table 1 reports the top fifteen judges from our sample ranked based on the absolute value of the political bias measure.

TABLE 1. FIFTEEN JUDGES WITH THE LOWEST
POLITICAL BIAS MEASURE SCORE

Judge	Party	Circuit	Mean Opposite_Party —Pool_Opposite
Ripple	Republican	7	−0.0007
Carnes	Republican	11	−0.0007
Black	Republican	11	−0.0031
Easterbrook	Republican	7	0.0047
Moore	Democrat	6	−0.0055
Alito	Republican	3	−0.0059
Arnold	Republican	8	−0.0060
Smith	Republican	5	0.0060
Edmondson	Republican	11	−0.0066
Rogers	Democrat	12	0.0069
Posner	Republican	7	−0.0081
Seymour	Democrat	10	−0.0082
Cole	Democrat	6	0.0083
Manion	Republican	7	0.0085
Henry	Democrat	10	−0.0112

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.
* Political bias is measured as the absolute value of the mean Opposite_Party minus Pool_Opposite score for each judge.

A couple of things stand out from Table 1. First, the Seventh Circuit is well represented (four of the top fifteen most neutral judges are from this Circuit). The question then is whether there is some dynamic on the Seventh Circuit that produces more neutrality in opinion creation. Prior research has shown that the judges of this circuit are unusually productive and efficient.[37] Perhaps efficiency and productivity also translate into neutrality. Second, three Republican judges who have often been characterized as partisan—Posner, Easterbrook, and Alito—show up as highly neutral in terms of their citation practices. Alito's numbers are especially interesting given that many painted him as highly conservative during his confirmation hearings. We find that Alito seems to have drawn authority relatively evenly from both his Republican and Democratic colleagues.

Table 2 reports the bottom fifteen federal circuit court judges from our sample ranked based on the absolute value of the political bias measure. We provide the ranking for our entire sample of ninety-eight active judges in the Appendix.

TABLE 2. FIFTEEN JUDGES WITH THE HIGHEST
POLITICAL BIAS MEASURE SCORE

Judge	Party	Circuit	Mean Opposite_Party —Pool_Opposite
Thomas	Democrat	9	−0.2755
Nelson	Republican	9	−0.1995
Widener	Republican	4	−0.1903
Schroeder	Democrat	9	−0.1782
Anderson	Democrat	11	0.1691
Tashima	Democrat	9	−0.1545
Higginbotham	Republican	5	0.1513
Calabresi	Democrat	2	−0.1399
Pregerson	Democrat	9	−0.1255
Daughtrey	Democrat	6	−0.1232
Dubina	Republican	11	0.1198
Williams	Republican	4	−0.1085
Kozinski	Republican	9	−0.1070
Sloviter	Democrat	3	−0.1049
Kelly	Republican	10	0.1048

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.

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37 *See* Lindquist, *supra* note 27 (manuscript at 15).

Note from Table 2 that the Ninth Circuit now stands out, with four members of the group of least neutral judges coming from this circuit (and none from the Seventh). Perhaps the size of the Ninth Circuit produces a higher amount of polarization than with other circuits. Aside from circuit comparisons, there are individual names here that were surprises to us: Calabresi and Kozinksi. These are two of the most respected and high profile judges in the nation (Calabresi having been a celebrated academic and the dean of the Yale Law School). As we will see later though, our results in Table 2 do not necessarily mean that Calabresi's opinions are not valued by Opposite Party judges.

Still other ways exist to rank judges. One alternative is to rank judges relative to other judges of the same political party. Which Republican judges tend to cite predominantly to other Republican judges and which ones tend to spread their citations more broadly to all judges? Focusing solely on Republican (or Democratic) judges allows for a relative ranking that filters out the influence of any particular Republican-wide methodology that results in more citations by Republican judges back to other Republican judges following the same common methodology. If a Republican judge chooses to avoid citing Democratic judges far more than the median Republican judge, this indicates that the (high) level of bias for that particular Republican judge is due to something other than just a general desire to follow a judicial methodology common to all Republican judges. If Judge X turns out to cite other Republican judges eighty percent of the time, whereas her other Republican colleagues cite other Republicans only fifty-five percent of the time, this suggests that Judge X's citations may reflect some more narrowly-held ideological motivations.

Reported in the Appendix, we provide a separate ranking of both Republican and Democratic judges based on the difference between our measure of political bias (the mean Opposite_Party— Pool_Opposite score) for each judge and the median judge. Note that three of the top five Democratic judges most inclined to cite other Democratic judges are from the Ninth Circuit (Thomas, Schroeder, and Tashima). Two of the top five Republican judges most inclined to cite other Republican judges are also from the Ninth Circuit (Nelson and Kozinski). This result may indicate greater polarization along party lines in the Ninth Circuit compared with other circuits.

Our initial rankings are crude. We do not control for a number of factors that may explain a citation pattern that favors (or disfavors) opposite party judges other than ideological bias. For example, other

biases may matter, including those based on age, race, gender, and law school cohort. In addition, judges with a particular position, such as chief judge, may act differently than other judges.[38] The particular subject matter may also make a difference. Judges may take more partisan positions in opinions dealing with "hot button" issues, such as civil rights. We leave more detailed analysis of bias for later research. The thrust of this portion of our Essay is that a ranking of judges based on citation bias is possible.

B. Adjusting Citation Counts for Bias

Once we recognize that ideological and other biases affect the citation practices of judges, we consider the question of whether it is still possible to rank judges using citation counts as a measure of quality. More citations to a particular judge's opinions may represent the ideological purity of that judge's opinions rather than value of the opinion for its reasoning or quality. Of course, some may say that ideological purity is the equivalent of quality. So long as not all hold this position though, there is value in separating how a judge ranks in terms of bias and in terms of non-bias-related factors.

As an example of how one can construct a ranking based on non-bias-related factors, we examine ideological bias once again. Our initial strategy to eliminate bias in citation counts is to look at the number of opposite party citations. We assume that a Democratic judge will cite to a Republican judge not for partisan reasons, but rather due to some other quality of the Republican judge's opinions. For each judge in our sample, we calculate the total number of citations from opposite party authored opinions from 1998 to 1999 to any of the judge in question's opinions ("Total_Opposite_Party_Citations"). Table 3 reports the top fifteen judges ranked based on the Opposite Party Citation measure.

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38 *See* Virginia Hettinger et al., *The Role and Impact of Chief Judges on the United States Courts of Appeals*, 24 JUST. SYS. J. 91, 100–01 (2003).

TABLE 3. TOP FIFTEEN JUDGES RANKED BASED ON
OPPOSITE PARTY CITATIONS

Judge	Party	Circuit	Total Opposite Party Citations
Posner	Republican	7	186
Selya	Republican	1	106
Easterbrook	Republican	7	102
Flaum	Republican	7	100
Reinhardt	Democrat	9	78
Seymour	Democrat	10	71
Sloviter	Democrat	3	69
Anderson	Democrat	11	66
Martin	Democrat	6	66
Edwards	Democrat	12	63
Wilkinson	Republican	4	58
Manion	Republican	7	54
Torruella	Republican	1	54
Coffey	Republican	7	54
King	Democrat	5	53

Note: Analysis performed for only outside circuit citations and pool of
outside circuit opinions.

Richard Posner, who shows at the top of almost every citation
ranking of either judges or legal academics, shows up at the top in
Table 3. In the two-year period that we examined, he had 186 cita-
tions from Opposite Party judges. The next highest number is for
Bruce Selya, who had 106. That is, a difference of eighty citations
between Posner and Selya. We get a sense of Posner's dominance
from the fact that this difference alone would have been enough to
take the fifth spot on the current list (Flaum, with seventy-eight Oppo-
site Party citations is fifth on the list).

At least two problems exist with the de-biased ranking based on
outside circuit citations from opposite party judges in Table 3. First,
even after limiting our sample to active judges, some judges may have
a larger stock of opinions than others. Posner, for example, authored
1654 opinions prior to 2000. In contrast, Hull authored forty-one
opinions. Posner may receive more citations simply because of the
larger number of his opinions. Second, the pool of opposite party
judge authored opinions differs for Democratic and Republican
judges. There are more Republican judges in our sample. A Demo-

cratic judge may receive a greater absolute number of opposite party citations to her opinions simply due to the larger number of citation chances due to the greater number of Republican authored opinions.

We adjust the Total_Opposite_Party_Citations in two ways to take into account these problems. First, we divide the Total_Opposite Party_Citations by the number of opinions authored by the judge in question. Second, we then divide the resulting ratio by the number of opinions in the pool of opposite party authored opinions. These two manipulations give us the average number of opposite party citations per opinion authored by an opposite party judge to each opinion authored by the judge in question. To make the ranking number more manageable, we multiply it by 100,000, yielding the Adjusted_Opposite_Party citation number. Table 4 reports the top fifteen judges ranked based on the Adjusted_Opposite_Party number.

TABLE 4. TOP FIFTEEN JUDGES RANKED BASED ON
ADJUSTED OPPOSITE PARTY CITATIONS

Judge	Party	Circuit	Adjusted Opposite Party	Opposite Party Citations	Pool of Opinions Authored by Judge in Question	Pool of Opinions Authored by Opposite Party Judges
Jacobs	Republican	2	8.0275	41	239	2137
Cabranes	Democrat	2	7.6682	38	127	3902
Calabresi	Democrat	2	7.3927	45	156	3902
Lynch	Democrat	1	7.2918	45	164	3763
Selya	Republican	1	6.5901	106	720	2234
Hull	Democrat	11	6.5548	10	41	3721
Scirica	Republican	3	6.5405	34	240	2166
Moore	Democrat	6	6.5060	46	180	3928
Walker	Republican	2	6.0065	43	335	2137
Garza	Republican	5	5.9801	44	357	2061
Evans	Democrat	7	5.7821	42	238	3052
Thomas	Democrat	9	5.5000	17	83	3724
Alito	Republican	3	5.4188	25	213	2166
Posner	Republican	7	5.3961	186	1654	2084
Nelson	Republican	9	5.3856	22	211	1936

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.

We see in Table 4 much greater variance in experience levels among judges than in Table 3. Judges Lynch and Calabresi, who have

been on the bench for significantly less time than Posner or Selya, now also appear in the top fifteen. Calabresi's numbers are particularly interesting because Table 2 reported him among the least neutral judges in terms of citation practices. In Table 4 though, we see that Calabresi's opinions are still respected enough that he is among those cited the most by those in the Opposite Party. The numbers for Calabresi tell us that we should be cautious in inferring too much about the bias in a judge's citation practices. On the other hand, Calabresi, because of his intellectual stature, may be an anomaly. Also interesting is that Alito shows up Table 4, indicating that not only does Alito tend to cite relatively evenly to judges from both parties (as we saw in Table 1), but that judges from the Opposite Party (Democrat appointed judges in the case of Alito) tend to cite Alito frequently.

Our crude ranking based on a de-biased measure of citation counts is subject to some flaws. It is possible that a Democratic judge may cite more to Republican judges because the Democratic judge is subject to review from a higher court (in this case the Supreme Court) comprised of a majority of Republican-appointed judges. It is also possible that some Democratic judges cite a lot to Republican judges because they are cantankerous and simply like explaining why the Republican judges are wrong (in other words, maybe the cross party cites are largely negative citations). Ideological bias may also matter more for particular subject matter categories (civil rights more so than tax law for example) and the degree of de-biasing we undertake should take these differences into account.

Solutions to these flaws are possible. We can imagine examining citation practices in cases where a reviewing court is comprised of more same- or opposite-party judges to determine whether this makes a difference (and the magnitude of the difference). If a difference does exist, citation counts could be adjusted to take into account the composition of a higher reviewing court. The negative citation problem is even more straightforward to correct; one needs to count the fraction of cites for a judge that are negative (as it turns out, prior research suggests that federal courts of appeals judges only make negative citations on rare occasions[39]). Finally, on the subject matter issue, studies may attempt to examine citation practices broken out by subject matter categories, determining the extent to which certain

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[39] *See* Peter McCormick, *The Supreme Court Cites the Supreme Court: Follow-Up Citation on the Supreme Court of Canada, 1989–1993*, 33 OSGOODE HALL L.J. 453, 462 (1996) (finding, for the Supreme Court of Canada, that less than one half of one percent of all judicial citations are critical); *see also* Choi & Gulati, *supra* note 15, at 56–57 (reporting that for the top ten judges in terms of citation counts to the top twenty citation-receiving opinions, only 8.9% of the citations were negative citations).

subject matter categories are affected by bias and adjusting citation counts accordingly. Our point is to demonstrate that adjusting for bias is possible and to argue that, with refinement, such de-biased citation counts can prove valuable in measuring judicial quality.

CONCLUSION

Judges make decisions based on a number of reasons. Examining the judicial opinions to which a judge cites, particularly out-of-jurisdiction opinions that are not cited for precedential value, divulges much about the judge's reasoning. Studying citation patterns may help to expose whether political (and other) types of biases influence judicial decisionmaking. While judges may desire that the public view their decisionmaking as based on broadly-held principles of judicial restraint and neutrality, a citation practice analysis may reveal that particular judges in fact base their decisions on more narrowly-held ideological views.

Making the presence of judicial bias based on narrowly-held ideological beliefs transparent provides benefits. For those researchers that rely on citation counts as a measure of judicial quality, identifying bias in citations provides a cautionary note in relying too heavily on this quality measure. Researchers may wish to employ various de-biasing strategies to cleanse citation count data of bias. More importantly, disclosing judicial bias may pressure judges not to engage in such practices. Judges that care about their public appearance and their potential for future promotion to higher courts may then adjust their decisionmaking to reflect a lower level of narrowly-held ideological bias.

This Essay is but a starting point in the examination of judicial bias in citation patterns. Our hope is that our initial rankings based on bias will serve as an impetus both for critiques of our crude attempt and for the development of better methods of measuring judicial bias.

APPENDIX

RANKING OF ALL NINETY-EIGHT ACTIVE JUDGES IN OUR SAMPLE BASED ON THE ABSOLUTE DISTANCE TO ZERO OF THE POLITICAL BIAS MEASURE

Judge	Party	Circuit	Mean Opposite_Party —Pool_Opposite
Ripple	Republican	7	−0.0007
Carnes	Republican	11	−0.0007
Black	Republican	11	−0.0031
Easterbrook	Republican	7	0.0047
Moore	Democrat	6	−0.0055
Alito	Republican	3	−0.0059
Arnold	Republican	8	−0.0060
Smith	Republican	5	0.0060
Edmondson	Republican	11	−0.0066
Rogers	Democrat	12	0.0069
Posner	Republican	7	−0.0081
Seymour	Democrat	10	−0.0082
Cole	Democrat	6	0.0083
Manion	Republican	7	0.0085
Henry	Democrat	10	−0.0112
Kleinfeld	Republican	9	−0.0120
Briscoe	Democrat	10	−0.0122
Walker	Republican	2	0.0162
Garza	Republican	5	−0.0172
Niemeyer	Republican	4	0.0179
Gilman	Democrat	6	−0.0206
Bowman	Republican	8	−0.0236
Clay	Democrat	6	0.0246
Selya	Republican	1	−0.0254
Dennis	Democrat	5	0.0257
Ebel	Republican	10	0.0258
Lynch	Democrat	1	−0.0258
Wilkinson	Republican	4	−0.0261
Edwards	Democrat	12	−0.0267
Wiener	Republican	5	0.0269
Jones	Republican	5	−0.0271

RANKING OF ALL JUDGES (CONTINUED)

Judge	Party	Circuit	Mean Opposite_Party —Pool_Opposite
McKee	Democrat	3	-0.0283
Trott	Republican	9	0.0304
Rymer	Republican	9	0.0310
Parker	Democrat	2	-0.0311
Wollman	Republican	8	-0.0318
Wood	Democrat	7	-0.0337
Tacha	Republican	10	0.0354
Hawkins	Democrat	9	-0.0360
Batchelder	Republican	6	0.0382
Evans	Democrat	7	0.0389
Michael	Democrat	4	-0.0392
Tjoflat	Republican	11	0.0433
Motz	Democrat	4	0.0451
Marcus	Democrat	11	-0.0451
Kanne	Republican	7	-0.0458
Torruella	Republican	1	-0.0470
Benavides	Democrat	5	0.0478
Cabranes	Democrat	2	0.0492
DeMoss	Republican	5	0.0496
Murphy	Democrat	8	-0.0506
King	Democrat	5	0.0507
Birch	Republican	11	-0.0524
Garland	Democrat	12	0.0529
Jolly	Republican	5	-0.0534
Barksdale	Republican	5	0.0567
Hull	Democrat	11	0.0572
Sentelle	Republican	12	-0.0618
O'Scannlain	Republican	9	0.0624
Boggs	Republican	6	0.0625
Wilkins	Republican	4	0.0627
Ginsburg	Republican	12	-0.0655
Loken	Republican	8	-0.0681
Luttig	Republican	4	0.0707
Rendell	Democrat	3	-0.0707

RANKING OF ALL JUDGES (CONTINUED)

Judge	Party	Circuit	Mean Opposite_Party —Pool_Opposite
Boudin	Republican	1	–0.0710
Randolph	Republican	12	–0.0725
Flaum	Republican	7	–0.0737
Davis	Republican	5	–0.0778
Lucero	Democrat	10	–0.0801
Jacobs	Republican	2	–0.0827
Tatel	Democrat	12	–0.0840
Murphy	Democrat	10	–0.0850
Stewart	Democrat	5	0.0853
Rovner	Republican	7	0.0860
Roth	Republican	3	0.0867
Scirica	Republican	3	0.0884
Coffey	Republican	7	–0.0959
Henderson	Republican	12	0.0959
Martin	Democrat	6	–0.0983
Nygaard	Republican	3	–0.0993
Reinhardt	Democrat	9	–0.1024
Barkett	Democrat	11	–0.1026
Kelly	Republican	10	0.1048
Sloviter	Democrat	3	–0.1049
Kozinski	Republican	9	–0.1070
Williams	Republican	4	–0.1085
Dubina	Republican	11	0.1198
Daughtrey	Democrat	6	–0.1232
Pregerson	Democrat	9	–0.1255
Calabresi	Democrat	2	–0.1399
Higginbotham	Republican	5	0.1513
Tashima	Democrat	9	–0.1545
Anderson	Democrat	11	0.1691
Schroeder	Democrat	9	–0.1782
Widener	Republican	4	–0.1903
Nelson	Republican	9	–0.1995
Thomas	Democrat	9	–0.2755

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.

RANKING OF DEMOCRATIC JUDGES ONLY

Ranking is based on the difference between the mean Opposite_Party—Pool_Opposite score for each judge and the mean Opposite_Party—Pool_Opposite score for the median Democratic judge (Parker) (termed "Adjusted Mean Opposite_Party—Pool_Opposite").

Judge	Circuit	Mean Opposite_Party— Pool_Opposite	Adjusted Mean Opposite_Party— Pool_Opposite
Thomas	9	-0.2755	-0.2444
Schroeder	9	-0.1782	-0.1471
Tashima	9	-0.1545	-0.1234
Calabresi	2	-0.1399	-0.1088
Pregerson	9	-0.1255	-0.0944
Daughtrey	6	-0.1232	-0.0921
Sloviter	3	-0.1049	-0.0738
Barkett	11	-0.1026	-0.0715
Reinhardt	9	-0.1024	-0.0713
Martin	6	-0.0983	-0.0672
Murphy	10	-0.0850	-0.0539
Tatel	12	-0.0840	-0.0529
Lucero	10	-0.0801	-0.0490
Rendell	3	-0.0707	-0.0396
Murphy	8	-0.0506	-0.0195
Marcus	11	-0.0451	-0.0140
Michael	4	-0.0392	-0.0081
Hawkins	9	-0.0360	-0.0049
Wood	7	-0.0337	-0.0026
Parker	2	-0.0311	0.0000
McKee	3	-0.0283	0.0028
Edwards	12	-0.0267	0.0044
Lynch	1	-0.0258	0.0053
Gilman	6	-0.0206	0.0105
Briscoe	10	-0.0122	0.0189
Henry	10	-0.0112	0.0199
Seymour	10	-0.0082	0.0229

RANKING OF DEMOCRATIC JUDGES ONLY (CONTINUED)

Judge	Circuit	Mean Opposite_Party— Pool_Opposite	Adjusted Mean Opposite_Party— Pool_Opposite
Moore	6	−0.0055	0.0256
Rogers	12	0.0069	0.0380
Cole	6	0.0083	0.0394
Clay	6	0.0246	0.0557
Dennis	5	0.0257	0.0568
Evans	7	0.0389	0.0700
Motz	4	0.0451	0.0762
Benavides	5	0.0478	0.0789
Cabranes	2	0.0492	0.0803
King	5	0.0507	0.0818
Garland	12	0.0529	0.0840
Hull	11	0.0572	0.0883
Stewart	5	0.0853	0.1164
Anderson	11	0.1691	0.2002

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.

APPENDIX

RANKING OF REPUBLICAN JUDGES ONLY

Ranking is based on the difference between the mean Opposite_Party—Pool_Opposite score for each judge and the mean Opposite_Party—Pool_Opposite score for the median Republican judge (Posner) (termed "Adjusted Mean Opposite_Party—Pool_Opposite").

Judge	Circuit	Mean Opposite_Party—Pool_Opposite	Adjusted Mean Opposite_Party—Pool_Opposite
Nelson	9	−0.1995	−0.1914
Widener	4	−0.1903	−0.1822
Williams	4	−0.1085	−0.1004
Kozinski	9	−0.1070	−0.0989
Nygaard	3	−0.0993	−0.0912
Coffey	7	−0.0959	−0.0878
Jacobs	2	−0.0827	−0.0746
Davis	5	−0.0778	−0.0697
Flaum	7	−0.0737	−0.0656
Randolph	12	−0.0725	−0.0644
Boudin	1	−0.0710	−0.0629
Loken	8	−0.0681	−0.0600
Ginsburg	12	−0.0655	−0.0574
Sentelle	12	−0.0618	−0.0537
Jolly	5	−0.0534	−0.0453
Birch	11	−0.0524	−0.0443
Torruella	1	−0.0470	−0.0389
Kanne	7	−0.0458	−0.0377
Wollman	8	−0.0318	−0.0237
Jones	5	−0.0271	−0.0190
Wilkinson	4	−0.0261	−0.0180
Selya	1	−0.0254	−0.0173
Bowman	8	−0.0236	−0.0155
Garza	5	−0.0172	−0.0091
Kleinfeld	9	−0.0120	−0.0039
Posner	7	−0.0081	0.0000
Edmondson	11	−0.0066	0.0015

RANKING OF REPUBLICAN JUDGES ONLY (CONTINUED)

Judge	Circuit	Mean Opposite_Party— Pool_Opposite	Adjusted Mean Opposite_Party— Pool_Opposite
Arnold	8	−0.0060	0.0021
Alito	3	−0.0059	0.0022
Black	11	−0.0031	0.0050
Carnes	11	−0.0007	0.0074
Ripple	7	−0.0007	0.0074
Easterbrook	7	0.0047	0.0128
Smith	5	0.0060	0.0141
Manion	7	0.0085	0.0166
Walker	2	0.0162	0.0243
Niemeyer	4	0.0179	0.0260
Ebel	10	0.0258	0.0339
Wiener	5	0.0269	0.0350
Trott	9	0.0304	0.0385
Rymer	9	0.0310	0.0391
Tacha	10	0.0354	0.0435
Batchelder	6	0.0382	0.0463
Tjoflat	11	0.0433	0.0514
DeMoss	5	0.0496	0.0577
Barksdale	5	0.0567	0.0648
O'Scannlain	9	0.0624	0.0705
Boggs	6	0.0625	0.0706
Wilkins	4	0.0627	0.0708
Luttig	4	0.0707	0.0788
Rovner	7	0.0860	0.0941
Roth	3	0.0867	0.0948
Scirica	3	0.0884	0.0965
Henderson	12	0.0959	0.1040
Kelly	10	0.1048	0.1129
Dubina	11	0.1198	0.1279
Higginbotham	5	0.1513	0.1594

Note: Analysis performed for only outside circuit citations and pool of outside circuit opinions.