

Advisors to Elites: Untangling their Effect

Sara C. Benesh, *University of Wisconsin, Milwaukee*

David A. Armstrong, *Western University*

Zachary C. Wallander, *Northwestern Mutual*

Journal of Law and Courts 8(1):Forthcoming, 2020

Advisors to Elites: Untangling their Effect

Decision-making in complex situations often involves the seeking out and consideration of advice, whether one is a patient contemplating medical treatment, a potential litigant considering filing a lawsuit, a taxpayer seeking to comply with the U.S. Tax Code, or a student determining which courses to take in the fall. All of these individuals consult experts and their eventual decisions reflect some combination of their own preferences and the information and advice they receive. The degree to which they rely on advice is likely to hinge on the degree to which they trust the advisor, which in turn depends on whether the decision maker ascribes to the advisor an adequate level of expertise and like-mindedness (Chaiken 1980; Yaniv 2004a).

That everyday people seek advice in these situations is unsurprising. Nearly all high-level administrators in the public or private sector seek advice too, formally or otherwise, among them, bureaucrats, members of Congress, judges, and the President of the United States. What is surprising, though, is that with the voluminous literature on decision-making in government, few have attempted to quantify the impact of advice. Research in psychology shows that reliance on advice and evaluation of the source of advice influence greatly both the decisions people make and their quality (see, e.g., Chaiken 1980; Yaniv 2004a). Thus, it seems that if we neglect the role of advisor, we miss something important.

In this article, we exploit a unique opportunity to bring a much-needed element of quantitative, empirical rigor to this literature in Political Science. Currently, the greatest proportion of research on advice is anecdotal (see, e.g., Kassop 2013; Garrison 2001).

Attempts at more systematic work are either formal (Calvert 1985) or experimental (Redd

2002) in nature.¹ We offer an empirical analysis of advice's effect on judicial decision-making, employing a modeling strategy that allows us to separate influences on the certiorari decision that stem from the case itself (its "certworthiness"), the cert pool recommendation (provided in a systematic memo), and the advice of the justice's own clerk (via mark-up of the cert pool memo). While this article examines only one Supreme Court justice's reliance on a group of advisors at one particular decision stage, it provides a requisite proof-of-concept for systematic, rigorous, quantitative research regarding the effect of advice and advisors on decisions more generally.² And, it avoids many of the

¹ And those experiments may not be terribly generalizable (see Mintz, Redd and Vedlitz 2006).

² As mentioned earlier, some research in political science has attempted to account for the influence of advisors: Calvert (1985), in a formal analysis, and Redd (2002), in an experimental study consider the role of advisors. And, as noted, many Presidency scholars include qualitative discussions of the influence of advisors (see, e.g., Kassop 2013; Garrison 2001). In addition, related public opinion research, drawing on the same psychological literature on which we draw, has focused on the role of source credibility and expertise as well as the ability of elites to frame issues in considering the public's response to policies (see, e.g., Mondak 1993a, 1993b; Huckfeldt 2001; Druckman 2001a, 2001b). We have failed to locate any empirical study, however, that explicitly models the influence of, reliance on, or distinctions among advisors on decision-making while controlling for other known determinants of a political elite's decision.

pitfalls of research seeking to evaluate the role of advisors, given that, in this situation (unlike in research on, for example, the presidency), the advice is written and signed by one particular advisor. We explain our advantage further below.

Decision-making Using Advice

Experimental research has yielded several useful findings about the use of advice in decision-making, much of which, we argue, is applicable to the relationship between Supreme Court Justice and Supreme Court law clerk. First, using advice and combining opinions of others to obtain that advice generally improves decision-making (Yaniv 2004b) and relying on evaluations of the source of the advice enhances efficiency (Chaiken 1980, Mondak 1993a). Second, people tend to weight their own opinion more heavily than they weight others' opinions, and the further advice is from their own preconceived notions in ideological space, the more discounted it becomes, especially for knowledgeable decision makers (Birnbaum and Stegner 1979; Huckfeldt 2001; Yaniv 2004a; Yaniv 2004b). Third, people evaluate the sources of advice, considering whether or not the advice is biased, whether or not the source is an expert, and how far from their own preconception the advice seems to be (Birnbaum and Stegner 1979; Huckfeldt 2001). (They rely on experts more often, especially when they are unbiased, but rely more heavily on even biased experts if they are in ideological agreement with them.)³ Fourth, even knowledgeable

³ Interestingly, and corroborated by Calvert's (1985) formal result, Birnbaum and Stegner (1979) note that advice will be weighted more heavily when a biased source offers advice *against* his or her bias. Cameron, Segal and Songer (2000) find this result as well, in studying Supreme Court treatment of circuit court decisions: A conservative Court is less

decision makers use heuristics at least to some degree to aid in decision-making, and sometimes those are based on certain characteristics of the source of advice, including perceived expertise and “likability” (Chaiken 1980, 762), though high issue involvement leads decision makers to rely less heavily on such cues. Fifth, source credibility can matter greatly to the decision maker considering advice as an heuristic device. To wit, any message delivered by a credible source can constitute persuasive evidence for decisions involving low degrees of personal relevance (or when decision makers have little issue-specific information), while source credibility is part of the evidence for decisions involving high degrees of personal relevance (or for those holding high levels of information) (Mondak 1990, 1993a).

The Case of Supreme Court Law Clerks and Certiorari Decision-making

Since Lazarus’ (1998) book (and before; see, Rehnquist 1957), scholars and citizens have been interested in the degree to which law clerks influence their justices, usually for normative reasons. By Lazarus’ account, law clerks not only influence their justices (something Woodward and Armstrong (1979) corroborate), but also produce the Supreme Court’s opinions. Wahlbeck, Spriggs and Sigelman (2002) test that claim and do show empirical evidence that law clerks have a stylistic influence over opinions authored ostensibly by their justice. Ditslear and Baum (2001) demonstrate that the Court’s ideological polarization could be a consequence of increasingly ideological clerk hiring

likely to review a conservative panel’s decision, especially when that panel reached a liberal result.

decisions, and Peppers and Zorn (2008) show that clerk ideology matters directly to the outcome on the merits (at least a little). We suggest that a focus on the stage at which clerks are most important, the certiorari stage, would be even more useful. Brenner and Palmer (1990) take such a tact using a list of votes in which Chief Justice Vinson followed his clerk's cert recommendations kept by Vinson's secretary. The availability of the Blackmun papers, which includes the actual marked up cert pool memos, means our investigation of clerk influence can go even further.⁴

Specifically, we seek to determine the extent to which law clerks' advice was used by Justice Blackmun in his decisions on cert. The institution of the law clerk was designed explicitly with workload reduction in mind, and the agenda-setting stage has often been its focus. Justice Lewis F. Powell, Jr., credited with the genesis of the institution of Supreme Court law clerk in 1972, suggested that justices should pool their clerks to improve the agenda-setting process by providing edited, reliable information about the cases seeking Supreme Court review in a way that does not duplicate chamber effort (Ward and Weiden 2006, 45). Indeed, this certiorari stage is the most important reason that the law clerks continue to be used; their work in sifting through cert petitions is among their most important and helpful functions (Best 2002; Brenner and Palmer 1990; Ward and Weiden 2006; Peppers 2006). That they produce a document at this stage -- the cert pool memo --

⁴ The Blackman Papers themselves are housed at the Library of Congress. The Digital Archive of the Papers of Harry A. Blackmun, created and maintained by Lee Epstein, Jeffrey A. Segal, and Harold J. Spaeth and supported by the National Science Foundation, can be found on Epstein's webpage at <http://epstein.wustl.edu/research/BlackmunArchive.html>. (Visited April 25, 2018).

which has summary information as well as a formal and specific recommendation to the justices, provides further corroboration for our conceptualization of the law clerk as advisor (and ends up being the greatest advantage of a Supreme Court focus).⁵ And, the institution of law clerk itself has professionalized, making reliance on clerk advice even more likely. Justices have long chosen graduates of the best law schools as clerks (Peppers 2006; Ward and Weiden 2006); today's clerks have the added training of having clerked for a lower court judge as well (Best 2002; Peppers 2006; Ward and Weiden 2006).

Finally, that we are able to use a written record of the advice provided, signed by the advisor providing it, advantages our approach over scholars who sought to evaluate the President's advisors and their relative influence over executive decisions, for example (e.g., Kassop 2013, Garrison 2001). In addition, it is very likely this written advice is candid, given that the Blackmun papers were the first to contain a full set of cert pool memos; their authors were writing only for the justices and not for posterity.⁶

Two kinds of advice exist at this stage, though: the cert pool memorandum and the clerk mark-up. Although only the former has been so far considered in an empirical

⁵ Many justices also have their clerks produce formal analyses of cases the justices decide to hear for their use during oral argument (Peppers 2006). Ascertaining whether these bench memos drive oral argument questioning and/or decision-making would be a fruitful direction for future consideration of the law clerk as advisor.

⁶ Indeed, were they writing for posterity, we'd likely see nearly complete agreement between the clerks' advice and the justice's decisions. We do not.

analysis (see Black and Boyd 2011),⁷ the literature on the role advice plays in decision making leads us to believe that the latter may be the more influential. We detail both pieces of information obtained by the Justice, and focus only on Justice Blackmun since he is the only justice for whom the full complement of necessary information exists.

The Cert Pool Memo

As we know, some of the justices on the Supreme Court have chosen to join the Powell-created cert pool.⁸ Clerks to those justices share the onus of reading and

⁷ Black and Boyd (2011) estimate a model of “cert-worthiness” and then use it to condition the effects of the memo pool clerk’s recommendation on the likelihood that the justices will agree with it. Their dependent variable, then, is agreement with the memo writer’s recommendation. Brenner and Palmer (1990) study clerk recommendations as well, but do so for terms that precede the institution of the cert pool. They find that Chief Justice Vinson agreed with his clerk’s recommendations as to cert more often than any other justice so agreed. They also seek to explore the ideological orientation of the clerks and change in that orientation over time. Their findings support, at least in part, our notion that the justice pay particular heed to their own clerks, discussed below.

⁸ It is, of course, completely up to the individual justices over whether or not they join the cert pool. At first, the pool included five justices. Later, all but two were members. (Justices Marshall and Stevens stayed out of the pool. Justice Stevens argued that having at least one justice outside the pool provided a check on the power ceded to a single clerk via the cert pool (Ward and Weiden 2006, 45)). Justices Alito and Gorsuch, on the current

summarizing the thousands of petitions received by the Court each year. The result of that process is a formal document, the cert pool memo, which takes a consistent format regardless of author. The first page of every memorandum lists the parties, the lower court (and judges) that made the most recent decision on the case, and an issue categorization. The memoranda then universally include the following: 1) a detailed summary of the case; 2) the facts and proceedings below; 3) the contentions made by the petitioner and the respondent; 4) the clerk's evaluation of the case; and 5) the recommendation by the clerk of what action should be taken. The Court directed clerks to include a recommendation as to cert as early as the second year the pool existed, suggesting that the justices welcomed this piece of advice (Ward and Weiden 2006). The justices (including Blackmun) also issued directives to the pool clerks from time-to-time, highlighting their desire for specific information from the memos, including, in Blackmun's case, a discussion of dissenting opinions below, and the names of the judges involved in the lower courts (Ward and Weiden 2006, 133).

Chambers Mark-up

In addition to this systematic pool memo, Blackmun (and most of the other justices) also requested that his clerks "mark-up" the memo. In most cases, this mark-up included a handwritten paragraph directly on the cert pool memo, reacting to the information therein, and ending with a recommendation as to cert. Blackmun's clerk also added information on

Court, have chosen not to join the cert pool (Liptak 2008, Liptak 2017). The newest Justice, Justice Kavanaugh, has joined the pool (Mauro 2018).

the memo's author, including their last name, law school, and justice/judge for whom they clerked. While the memo has been said to be objective, the mark-up has been described as far more candid and justice-specific (see, e.g., Ward and Weiden 2006, 130). This direct, specific advice is likely the reason for the mark-up in the first place (Ward and Weiden 2006). We distill both the memo author's advice and Blackmun's clerk's advice into grant or deny from the 39 potential recommendations we encountered in these cases, enabling comparison of their independent effects.⁹

⁹ We coded the following recommendations as advice favoring cert: grant, J3 (Join Three), CFR (Call For Record) w/possibility to grant, CVSG (Call for Views of Solicitor General) w/a view to grant, CVSG w/eye toward noting probable jurisdiction, summarily reverse, GVR (Grant, Vacate, Remand), grant and consolidate, tentative grant, grant or CVSG, summarily reverse or grant, hold or grant, grant or J3, grant and deny, J3 and deny, grant and summarily reverse, hold and grant, relist and grant and consolidate, tentative grant or summarily reverse, grant, deny and CFR w/possibility to grant, and grant and CFR w/possibility to grant. The following were coded as advice favoring denial: X (Deny), CFR w/a possibility to deny, CVSG w/a view to deny, X?, DWJ (Dismiss for Want of Jurisdiction), deny or dismiss for want of jurisdiction, CVSG or deny, DWSFQ (Dismiss for Want of a Sufficient Federal Question), deny or hold, D and D, deny and summarily reverse, CFR or deny, hold and deny, DWPPFQ (Dismiss for Want of a Properly Presented Federal Question), and DNPPFQ (Dismiss for No Properly Presented Federal Question). (Note that we have interpreted the abbreviations used in the memos to the best of our ability. It is

Focusing on Justice Blackmun

We focus solely on Justice Blackmun for two reasons. First, Justice Blackmun had his clerks mark-up the memos, so each memo in his papers contains both the recommendation of the cert pool memo writer and his own clerk's. Second, Blackmun is the only justice with a complete set of publicly-available papers at the cert stage. While we recognize this affects our ability to generalize to other justices on the Court, we sacrifice generalizability and its attending external validity for the ability to consider the differential effect of someone else's clerk's advice on a justice's vote as compared with the effect of advice from a justice's own clerk (i.e., internal validity). In order to be sure of the distinction we draw between a general clerk in the cert pool and Blackmun's own clerk, we consider only those cases in which one of Justice Blackmun's clerks was not the cert pool memo author. In addition to the empirical reality that we have mark-ups only on Blackmun's copies of the memo, we also feel most confident in the relationship between the theory and Justice Blackmun's vote, given that we know that he requested exactly the sorts of information we might expect a decision maker seeking to evaluate advice might request. Importantly, Blackmun's papers include both the memo recommendation and the recommendation of his own law clerk as to cert for both denials and grants.¹⁰

possible we have some not-quite-right, but we think it is unlikely that we have misconstrued their underlying support for or opposition to cert.)

¹⁰ Justice Powell's clerks marked up memos as well, in much the same way as Blackmun's did. (See law2.wlu.edu/powellarchives to view some of the marked-up cert pool memos.)

According to the head librarian of the Powell papers at Washington & Lee School of Law

But Justice Blackmun is clearly not the only justice who sought advice from clerks. As noted earlier, most of the justices require their clerks to mark-up the cert pool memos (Peppers 2006), and nearly all of the justices have noted, either in internal Court correspondence or publicly, that they want advice from their clerks. One Rehnquist clerk tells Ward (2012) that it was expected that he provide Rehnquist with his own views and a

(via email on April 23, 2014), however, “Justice Powell had record keeping procedures in his chambers that called for the destruction of all records of cases not granted cert.” Justices Ginsburg (Peppers 2012) and Rehnquist (Ward 2012) also required mark-up of the cert pool memos. Justice Rehnquist’s collection possibly contains some cert pool memoranda, but only those papers involving deceased justices are available to the public. (See <http://pdf.oac.cdlib.org/pdf/hover/rehnquis.pdf>. Email correspondence with the Hoover Institute assistant archivist (Carol A. Leadenham on September 17, 2015) was inconclusive as to whether or not cert pool memos were retained.) And Justice Ginsburg’s, of course, are unavailable as she remains on the Bench. One of Justice White’s clerks noted that the justice emphasized the need for his clerks to independently analyze whether or not an alleged conflict, noted in the cert pool memo, was real (Worthen 2012, 307). His papers, however, appear to include only those files relevant to cases that were actually decided. (See the Library of Congress’ Finding Aid for his papers, available at <http://lccn.loc.gov/mm88077264>.) Unfortunately, only Blackmun retained and has made available a complete set of these marked-up memos. Again, though, that we have a signed and written record of advice makes our analysis unique in the literature on advisors even if we have to admit that the findings may not hold for all Justices.

recommendation, and Rehnquist suggests that the impetus for the cert pool was so that justices could focus on the memo, alleviating the need to read the whole record (Ward and Weiden 2006). Best (2002) deems it clear that the justices rely on their clerks at cert. As Schwartz says, the justices had to learn to rely on their staff, just like Congress does, when their workload increased (as cited by Best 2002). Justices outside the cert pool likewise found it necessary to delegate and sought clerk recommendations (Best 2002). Hence, while our singular focus on Justice Blackmun surely limits generalizability, there is little evidence to suggest that he is, himself, singular in his use of clerk advice.¹¹

The existence of the pool, then, surely signified an institutional decision that the justices needed help (advice) in case selection, but the mark-ups are particularly useful given the close relationship that exists between nearly every justice and his or her clerks. These advisors were particularly trusted to evaluate the cert pool memo and make a recommendation. Many former clerks speak very personally of their relationship with their justices (see, e.g., Bezanson 2012; O'Neil 2012; Ward 2012; Worthen 2012). The personal, trusted assistant is just the right advisor to consider for our purposes and likely has analogues in other areas of government (e.g., presidential, vice-presidential, and Congressional chiefs of staff, among others).

¹¹ Peppers (2006) considers allegations made by historian David Garrow that Blackmun ceded too much control to his clerks, and, noting strong reaction from Blackmun's former law clerks and his own review of the Blackmun papers, Peppers concludes that Blackmun was not an outlier among the justices. Lazarus (1998) and Greenhouse (2005) seem to conclude similarly.

Combining advice from the pool memo with the additional advice from Blackmun's own clerks, then, we can not only measure the effect of the recommendation of the clerk writing the cert pool memorandum on Justice Blackmun's vote (even after controlling for the case's cert-worthiness) as Black and Boyd (2011) do, but we are also able to tap into the theoretical expectation that not all advice is equal, comparing the impact of the memo writer (weighted by the ideological distance between Justice Blackmun and his or her justice¹²) with the effect of Justice Blackmun's own clerk's advice. Lazarus assumes that the

¹² We include ideological distance as a way to measure the psychological influence of source on acceptance of advice. It would also be consistent with this theory to ascertain whether the justices treat clerks with different pedigrees differentially as well, in an effort to distinguish "good" or "credible" advice from "bad" or "incredible" advice. However, our set of clerks, as one might imagine, is skewed toward those attending prestigious law schools, including Harvard, Yale, Michigan, Columbia, Stanford, Chicago, and Berkeley, among others (see Sauder and Espeland 2007 on the *U.S. News & World Reports* rankings). This distribution makes it difficult to identify which clerks might have more credibility than their also-impressive colleagues. We could rely only on attendance at the top two law schools in the nation – Harvard or Yale – as distinguishing the "best" clerks from the rest of the clerks. But there, too, there is not much variation. (21% went to Harvard; 18% went to Yale.) They are all elite, really. They were hired by Supreme Court justices from among thousands of applications. Hence, we focus solely on ideological distance as a measure of source credibility. This is particularly defensible for Supreme Court justices, given the

cert pool memos carry great weight (1998) and suggests that it is possible that the ideological slant of the clerks had some effect, via their framing of the cases, on the way the justices viewed the potential cases. Indeed, this potential was what Rehnquist wrote about in 1957 in his article on the influence of law clerks (which touched off an ideological debate). This potential is corroborated by the fact that most of the justices, as mentioned above, considering the memos to be subject to manipulation by ideological clerks, had their clerks look them over and mark them up (and sometimes rewrite them), ensuring they were fair appraisals of the cases seeking review (Liptak 2008; Peppers 2006). Of course, others characterize these as the more objective piece of advice (Ward and Weiden 2006). Hence, while the cert vote may well be influenced by (or appear to be influenced by) the recommendation of the cert pool memo author (Black and Boyd 2011), the Justices are likely even more interested in the reaction to the pool memo of their own, most trusted advisor. We seek to test this idea for Justice Blackmun.¹³

widely accepted and substantial role of attitudes in their decision making (see, e.g., Segal and Spaeth 1996).

¹³ For two reasons, we deem our test to be a conservative one. First, Peppers characterizes the memos as a monitoring mechanism. Hence, he might expect that the memos would merely and directly reflect the information regarding the cert-worthiness of the case that is available to all making the decision. This limits our opportunity to find an independent influence for them. Second, the sophistication of the Justices as decision-makers counsels against finding a statistically significant influence of law clerk advice, given the psychological literature reviewed above.

The Cert Literature

Scholars have long sought to explain and predict the Supreme Court's decisions on certiorari, its agenda-setting behavior, and so we must control for alternative explanations for judicial votes on cert to isolate advisor effects (see, e.g., Benesh, Brenner and Spaeth 2002; Boucher and Segal 1995; Brenner and Krol 1989; Caldeira and Wright 1988; Caldeira 1990; Krol and Brenner 1990; Palmer 1982; Perry 1992; Provine 1980). The best of these studies considers both those cases granted cert and those cases denied cert, enabling its authors to fully model the decision by a justice to hear a given case (Caldeira, Wright and Zorn 1999). Caldeira, Wright and Zorn (1999) employ all those variables found to be determinants of cert by past research and combine them in a model that explicitly tests for the existence of sophisticated voting. They consider the U.S. as petitioner; lower court reversal; alleged and actual conflict; the presence of a civil liberties issue; amicus briefs for and against cert; whether or not a constitutional claim existed; whether there was dissent among the lower court judges considering the case; whether or not the lower court's decision was conservative; the Justices' ideology; the ideological leaning of the Court; and the interaction between the leaning of the Court and the leaning of the Justice. Controlling for all of these variables, as well as for the Solicitor General's view on the advisability of granting cert,¹⁴ we seek to determine whether the role of advice ought be considered as well.

¹⁴ While we focus on *law clerk* as advisor, we could surely also consider the *Solicitor General* to be an important Supreme Court advisor, providing trusted information to the Court. We know from many studies that the SG is disproportionately successful, both on

Operationalization of the Role of Advice

Relying on theoretical expectations as to the use of and evaluation of advice as well as the literature on certiorari, we model three stages: the memo writer's recommendation as to cert, Justice Blackmun's clerk's recommendation as to cert, and Justice Blackmun's vote on cert. This set of empirical analyses considers the real possibility, plaguing much research on the influence of clerks or other advisors, that the advisors (clerks) are simply making the recommendation that their boss (justice) would, driven by all the same influences as those driving the ultimate decision. Given the neat chronology of this series of decisions, we can be sure that influences are posited in the correct causal direction, and we are able to compare the influences on decision-making across actors. We include, then, where relevant, ideological bias, source of advice, direction of the lower court's decision, outcome prediction, and cert-worthiness. We detail each in this section.

First, it appears to be the case that decision makers generally suffer from a bias in favor of their own predilections, oftentimes discounting advice with which they disagree

the merits (see, e.g., Black and Owens 2012; McGuire 1998) and on cert (see, e.g., Owens and Black 2012; Perry 1992). Hence, we include a variable that measures the position taken by the SG as to cert, either as a party to the suit, as an amicus filing voluntarily, or as a respondent to the Court's call for the views of the Solicitor General. We code the SG's recommendation as 1 when he (Charles Fried, then Kenneth Starr, then Drew Days) suggests the Court grant cert, 0 when he takes no position, and -1 when he recommends the Court deny cert. We expect this influential attorney to be able to both enhance the likelihood of a cert grant and depress that likelihood, depending on his advice.

(Yaniv 2004a). This is especially true when a decision maker has high levels of information and/or personal interest in the subject; under those circumstances, they are less likely to rely on advice and more likely to make an independent decision. Using that logic, then, we expect that Justice Blackmun will be most influenced by advice coming from his clerk (with whom he likely shares ideology (see Ditslear and Baum 2001)). In addition, to the degree Blackmun does consider the cert pool memo's recommendation, he will be more likely to do so when he is closer to the authoring clerk's justice's ideology. Likewise, his clerk will likely consider the pool memo's recommendation in light of the ideology of the justice for whom the author clerks. Not only does this fit the idea of bias of the decision maker, but it also fits with Calvert's analysis of biased advisors (1985; see note 3). We measure Ideological Disagreement using Martin-Quinn scores, calculating the absolute difference between Justice Blackmun and the memo writer's justice in the term previous, such that higher numbers indicate greater disagreement (Martin and Quinn 2002). As distance increases, the advice provided by the clerk will be less influential on Blackmun's clerk's recommendation, and, ultimately, on Blackmun's vote.

In addition to an ideological bias, decision makers also consider the expertise of their advisors in making their decisions (Birnbaum and Stegner 1979; Huckfeldt 2001). This "source cue" is especially likely to influence decision makers with a need for efficiency (Mondak 1993a, 1993b). Considering the huge number of cert petitions received each year, and the wide variety of topics addressed by them, it seems reasonable to assume that the justices would employ some shortcuts in ascertaining which petitions are worthy of review. Under this reasoning, we again expect Justice Blackmun to rely more heavily on his own clerks' recommendations than on the recommendation of the clerks from other

chambers, given that he will be more likely to know what has generated his own clerks' advice than he is to know what generated the advice of clerks for other justices, and more likely to agree with it. Just as a person more likely values his or her own opinion given that she or he knows what biases and information went into its creation (Yaniv 2004a), so too would the justices feel more comfortable using their clerks' advice, given what they know about their level of knowledge and their ideological predispositions. Because of our singular focus on Justice Blackmun, we are able to include both the memo writer's recommendation and Blackmun's own clerks' recommendation, via his or her marked up pool memo. As noted earlier, we do not possess any other complete collection of marked-up pool memoranda for any other justice.

The clerks and the Justice may well consider the lower court's direction in their recommendation/decision, given the justices' tendency to take cases in order to reverse them. We expect cases decided conservatively in the lower court to be more likely to attract a cert recommendation from Justice Blackmun's clerk and a cert vote from Justice Blackmun than those decided liberally. The cert pool memo clerks should be less likely to recommend a grant under those circumstances, however, given that, overall, the justices in the cert pool during this time (including Justices Powell, White, Rehnquist, O'Connor, Scalia, Kennedy, Souter and Thomas) were conservative. (We operationalize this measure as the directionality of the lower court decision, using Spaeth's coding rules for liberal and conservative as our guide.¹⁵)

¹⁵ See Spaeth, et al. 2015 for details.

In addition, outcome prediction – the looking forward to the likely outcome on the merits – should also matter to all of the decision makers. Measured as the distance between the justice and the Court’s median, this variable should be negatively related to cert. As the justice in question moves further from the Court’s median, he or she (or their clerk) will be less likely to vote for or recommend a grant.

None of these things, though, will alone drive either the recommendations of the clerks or Justice Blackmun’s cert vote. Indeed, the literature is replete with determinants of cert. We expect aspects of the cases that contribute to their “cert-worthiness” will be an important predictor of the recommendation/vote at each stage in the advising process.¹⁶

We know that decisions to decide matter greatly and that agenda-setting is one of the major powers of the Supreme Court, one often credited for the Court’s unique policy making position. We also know that setting the agenda, given the huge number of cases seeking review each year, is extremely time-consuming.¹⁷ And, many who study clerks

¹⁶ We discuss our operationalization of this variable below. In general, we follow the strategy proposed by Black and Boyd (2011), based on the earlier discussed work of Caldeira, Wright, and Zorn (1999).

¹⁷ A letter from Powell to the Chief Justice regarding the cert pool confirms this. Written after the Court’s first year using the pool, Powell makes the case for continuation and expansion. He notes that it reduces the time his clerks spend on petitions and gives him “in effect...a double review” of the petitions. (Memo from June 7, 1973, from the “Misc Memos” box of the Powell papers, provided to the authors by John N. Jacob, Archivist and Special Collections Law Librarian, Washington & Lee School of Law.)

indicate that clerk influence is most likely felt during the cert process, with the clerks themselves corroborating this impression (see, e.g., Ward and Weiden 2006). That the research shows that using advice improves both the quality of decisions and the efficiency of decision-making makes it quite reasonable for the justices to rely upon advisors to help them make good decisions on case selection. Ascertaining exactly how is our goal.

We evaluate the following expectations:

Expectation 1: The **pool memorandum writer** will be influenced mostly by cert-worthiness. Since the memo is meant to be objective, strategic concerns will not enter into the recommendation (or, at the least, they will be less important to this clerk than to Blackmun's clerk, or to Blackmun himself).

Expectation 2: **Justice Blackmun's clerk** is more likely to rely on the advice of the cert pool memo writer when the cert pool memo writer's justice is ideologically more proximate to Justice Blackmun, and will be influenced by both cert-worthiness and by strategic concerns.

Expectation 3: **Justice Blackmun** will rely on his own clerk rather than the cert pool memo writer in his decision. To the extent that he does consider the memo's recommendation, he is more likely to do so for clerks who work for Justices ideologically similar to himself.

Data and Methods

Using the Spaeth et al. (2009) data (for cert grants) along with the online archive of the Blackmun papers (Epstein, Segal and Spaeth 2007) (for cert denials), we draw a sample

of cert denials and cert grants in cases considered by the conference during OT 1986 – OT 1993.¹⁸

We utilize the Blackmun archive for data on Justice Blackmun’s cert votes (taken from the docket sheets housed there) and for the cert pool memos with mark-up, also posted.¹⁹ The Court’s advising mechanism unfolds sequentially. The memorandum writer provides a memo to the chambers of each member Justice in the cert pool. One of the justices’ own clerks considers the memo, adds his or her comments, and makes a recommendation specific to his or her Justice as to cert. The Justice then must vote on the issue taking into account all of the evidence before him or her – the pool writer’s memo, his or her own clerk’s mark-up, and the characteristics of the case at hand as detailed in the memo.

¹⁸ We sample terms separately and draw cases randomly in equal numbers from those granted and denied cert. We retain unpaid petitions, also known as *in forma pauperis* (IFP), because during the era of the Blackmun Papers (1986-1993), IFP cases were reviewed by the Court using the same process as paid petitions. We, like most scholars studying cert, exclude cases that do not reach the discuss list (Black and Boyd 2011; Black and Owens 2012). We use the King and Zeng (2001) procedure to enable consideration of this skewed dependent variable. This is described in more detail below.

¹⁹ The Digital Archive of the Papers of Harry A. Blackmun, supported by the National Science Foundation, is housed at <http://epstein.wustl.edu/blackmun.php>, and is comprised of digital photos of the actual papers. (The CoPIs of this excellent resource are Lee Epstein, Jeff Segal and Harold Spaeth.)

Because there are three stages in the cert decision, we estimate three models, one for each actor's decision. Though all of the decisions are binary, a run-of-the-mill logistic regression is not well suited to this task given that, in our sample, the ones (grants) are vastly overrepresented relative to their prevalence in the population. We would, as a result, get an inflated sense of the likelihood that cert would be granted. Instead, we use a rare events logistic regression, suggested by King and Zeng (2001), which is designed to estimate models of case control designs, modified for our sampling focus (Court decisions rather than individual actor decisions).²⁰

²⁰ We have no particular reason to believe that the ones we capture in the data (Court grants) are systematically different from the ones not captured in the data for any of the actors (the recommendations or votes to grant). Indeed, we are confident that by capturing cases granted certiorari, we are capturing the vast majority of Blackmun's votes to grant certiorari. In the existing data, Blackmun votes to grant certiorari 484 times; certiorari is granted 457 times (~ 94%). In the data, when Blackmun votes to deny certiorari (968 times), it is actually denied 759 times (~ 78%). Similar patterns emerge when we examine Blackmun's clerk's recommendation on certiorari. Blackmun's clerk recommends granting certiorari 480 times, of which 412 are actually granted (~ 85%). When Blackmun's clerk recommends denying certiorari (972 times), it is actually denied by the Court 718 times (~ 74%). The pool memorandum writer's numbers are also close to the Court's. The memorandum writer recommends granting certiorari 526 times of which 466 are actually granted by the Court (~ 89%). When the memorandum writer recommends denying

In order to do so, we first specify the true proportion of ones in the population (King and Zeng call this number τ). From Wallander (2014), we know that the Court granted certiorari to about 3% of cases over this time period, so if we were modeling the Court's decision to grant certiorari, we would set $\tau = .03$. However, even though we know the aggregate values for the Court's decision to grant certiorari, we do not know the exact values for each of the three actors involved. Further, we exclude cases that do not make the discuss list. Assuming that roughly 20% of the cases are discussed (Caldeira and Wright 1990), that would mean that the proportion of grants among the discussed cases is $\frac{0.03}{0.20} = 0.15$. Using this figure, we can estimate grant rates for the three relevant actors. For the memorandum writer, we know that of the 85% of actual denials, the memorandum writer recommended granting certiorari 19% of the time. Of the 15% of actual grants of certiorari, the memorandum writer recommends granting certiorari around 72% of the time. This means that we would expect the actual number of memorandum writer recommendations to grant certiorari in the population to be $0.85 \times 0.19 + 0.15 \times 0.72 = 0.27$. The same quantity calculated for Blackmun's clerk is 0.24 and for Blackmun himself is 0.23. In other words, while the Court grants cert to 15% of these cases it discusses, the memo writer recommends a grant in 27%, Blackmun's clerk recommends in 24% and

certiorari (926 times), it is actually denied 726 times (~ 78%). So, while we do not sample from the clerks or Justice Blackmun's vote data, the Court data approximates it.

Justice Blackmun votes to grant on 23% of petitions. We refer to these numbers as $\hat{\tau}_{MW}$, $\hat{\tau}_{BC}$ and $\hat{\tau}_B$, respectively.

If we were confident that these numbers were exactly right, we could specify each as τ in the relevant context and proceed with the case control analysis as suggested by King and Zeng (2001). However, since we do not possess all of the data, we know these are only estimates, with associated sampling uncertainty. We will identify particular model specification soon, but assume for the time being that we can estimate $\Pr(y = 1|x, \tau, \beta) = f(x\beta, \tau)$, where $f(\cdot)$ in this case represents the rare events logistic regression estimator. We can use this estimator to obtain the posterior distribution of β [$p(\beta|x, y, \tau)$].²¹ Rather than treating τ as fixed, we treat τ as stochastic and marginalize over its probability distribution:²²

$$p(\beta|x, y) = \int p(\beta|x, y, \tau)p(\tau)d\tau$$

²¹ Assuming flat priors over the parameter's support, the parameter's posterior in a GLM is normal with mean equal to the estimated parameter value and the variance equal to the parameter's estimate variance. This is the approach adopted by King, Tomz and Wittenberg (2000).

²² We use a Monte Carlo integration to get the posterior distribution of β net of the uncertainty in τ (see Kalos and Whitlock (2008) for details). This is the same method proposed by Treier and Jackman (2008) and Pemstein, Meserve and Melton (2010) for taking account of uncertainty in latent variable estimates.

To do this, we need a probability distribution over which to marginalize. Recall that τ is the proportion of ones in the population. What we need to know is the overall probability of recommending or voting to grant, which can be calculated as: $\Pr(\text{Recommendation} = \text{Yes}) = \Pr(\text{Recommendation} = \text{Yes} \mid \text{Cert Granted}) * \Pr(\text{Cert Granted}) + \Pr(\text{Recommendation} = \text{Yes} \mid \text{Cert Not Granted}) * \Pr(\text{Cert Not Granted})$. We estimate these remaining quantities with a Bayesian logistic regression model of each decision-maker's recommendation (deny or grant) on whether or not the case was actually granted cert (here, the independent variable). We use this to get the posterior distribution of $p(\text{Recommendation} = \text{Yes} \mid \text{Cert Not Granted})$ and $p(\text{Recommendation} = \text{Yes} \mid \text{Cert Granted})$. We use these posteriors to induce a posterior distribution on τ by calculating the quantity for each draw from the two posteriors mentioned directly above. Thus, we marginalize over draws from the posterior distributions of τ for each decision maker in the appropriate model.

Pool Memo Writer's Recommendation

Because the memo clerk's recommendation comes first, only cert-worthiness and strategic considerations (with reference to his or her own justice) should matter to him or her and, because the cert pool memo is expected to be more objective, we expect the cert-worthiness of a case to matter the most at this stage. To that end, we adopt the modeling strategy suggested above and include as predictors the lower court direction, the memo writer's justice's distance to the Court median, and the case's cert-worthiness. Following Black and Boyd (2011), we create a measure of the cert-worthiness of each case seeking review, operationalized as the predicted probability of a particular case obtaining review,

estimated via a logistic regression including all known determinants of the cert vote.²³

While there are potentially more flexible means for creating this variable relating cert

²³ We include, as mentioned earlier, all those variables considered by Caldeira, Wright and Zorn (1999). These include the following, measured as specified. We code *allegations of conflict* by reading the contentions section of the cert pool memo. In this section, the memo author discusses whether the litigants allege conflict among the circuits or among other courts (alleged conflict = 1, 0 otherwise). We code *actual conflict* by reading the discussion section. Here, the clerk always addresses an allegation of conflict and provides advice as to whether or not the conflict is “real.” When the clerk finds it to be “real” and discusses the circuits that are conflicting, we code actual conflict as 1, 0 otherwise. This is, incidentally, a far superior measure of conflict than measures used in other studies that do not rely on the memos. Caldeira, Wright and Zorn (1999), lacking access to the memos, used instead a law school study of conflict. We argue that a direct analysis by the Supreme Court clerks of whether or not conflict exists, relied upon by the justices, better measures the concept. In measuring the influence of *amici*, we include both amicus arguing for and amicus arguing against cert, given Caldeira, Wright and Zorn’s finding that both enhance the likelihood of a cert grant during this time frame (1999). We measure all other controls in conventional ways, consistent with the literature: *dissent in the lower court* is a dummy variable (1 = dissent); *disagreement among the lower courts* is coded 1 when the circuit court reverses the district court; *constitutional issue* is coded 1 when the question in the case is of a constitutional nature as noted in the memo; and *Solicitor General* is coded 1 whenever the U.S. or an administrative agency is seeking cert or the SG files an amicus on behalf of the

grants to case characteristics (e.g., machine-learning techniques), we find that the logistic regression model performs sufficiently well that the value added of the extra complication is nearly zero.²⁴

[Insert Table 1 About Here]

The first column of Table 1 represents the posterior means of the coefficients from our first rare events logistic regression model (of the cert pool memo writer's recommendation) along with the 95% highest density region.²⁵ Here, we find as expected, that cert-worthiness is influential while neither the direction of the lower court ruling nor

petitioner, 0 if there is no SG involvement, and -1 if the SG opposes cert as the respondent or as amici.

²⁴ The full results of the comparison of the parametric cert-worthiness model and the BART model are available in Appendix A.

²⁵ The model proposed above used a Monte Carlo integration to account for uncertainty in τ . Given that cert-worthiness is also an estimate, we need to do that here as well. So, assuming \hat{c} is our variable of cert-worthiness (predictions from a logistic regression model where the actual cert decision c , is the outcome), Z is the design matrix for the set of variables thought to influence cert-worthiness, y is the actor's decision and x is the set of other model regressors, then we have:

$$p(\beta|x, y) = \int \int p(\beta|x, y, \hat{c}, \tau)p(\tau)p(\hat{c}|c, Z)d\tau d\hat{c}$$

the distance to Court median matter.²⁶ Considering cert worthiness, its effect is 0.52, which is a substantively large effect as this effect is theoretically bounded in the range (-1,1).²⁷

²⁶ We are using the highest posterior density (HPD) region to make this assertion. The HPD is simply the smallest region of the parameter's support that contains 95% of the parameter's posterior density. This is akin to a 95% confidence interval in frequentist statistics, but we can interpret this more naturally. This tells us with 95% probability where the coefficient is; when that interval does not include zero, we are confident its effect is in the indicated direction.

²⁷ To operationalize the effect of the variable, we use the average first difference for a maximal change in the variable. We can calculate these changes using B , which is a $k \times 1500$ matrix of draws from the posterior distribution of β (the model coefficients), X_1 is the $n \times k$ design matrix for the model with the j^{th} variable replaced with its lowest value, X_2 is the design matrix for the model with the j^{th} variable replaced with its maximum value, and $\Lambda(\cdot)$ is the CDF of the logistic distribution which translates linear predictions into predicted probabilities. Next, we create $D_{ij} = \Lambda(X_2 B) - \Lambda(X_1 B)$, which is a $n \times 1500$ matrix of maximal first differences. To calculate the average marginal effect, we calculate $\bar{D}_j = \frac{1}{n} \sum_i D_{ij}$, which is the average first difference, maintaining the observed values for the original variables as suggested by Hanmer and Kalkan (2013). The vector \bar{D}_j can then be interpreted as draws from the posterior distribution of average marginal effects. Summarizing that distribution (i.e., finding the mean and HPD) allow us to describe the nature and variability of first differences.

Substantively, court cases with maximal cert-worthiness have a probability of being granted cert on average 0.52 higher than those with the lowest cert-worthiness scores (averaging over the original values of lower-court direction and distance to median). This suggests case-related considerations are vastly more important than strategic concerns related to the direction of the lower court's decision or the ideological placement of the Justice relative to the Court's median for the memo clerk's recommendation.

These findings are consistent with our first expectation. The only interesting effect (statistically or substantively) is the effect of cert-worthiness on the pool memo writer's recommendation. Further, this suggests that the justices may reasonably view these memos as containing objective information, just as designed, since they appear to be largely uncontaminated by strategic considerations that might be relevant to the memo writer's justice.

Blackmun's Clerk's Recommendation

Next, we model Blackmun's clerk's recommendation on cert, the results of which are shown in the second column of Table 1. Many of our expectations are borne out here as well. First, strategic concerns matter for Blackmun's clerk's recommendation, evidenced by the statistical reliability of the coefficient on lower court direction. The effect of the lower court direction is -0.19. This suggests that cases decided by lower courts in the liberal direction are less likely to be recommended for cert by Blackmun's clerk. That said, not all strategic concerns are important. Blackmun's distance to the court median has no discernible effect on the probability that his clerk recommends granting cert, demonstrating a potential lack of concern with the outcome on the merits.

Cert-worthiness and the pool memo recommendation matter as well. Since the effects of these variables are conditional and non-linear, we present them in Figure 1. Each panel of the figure represents a different condition of cert-worthiness. The upper-left panel considers cases with the lowest cert-worthiness; cert-worthiness increases as one moves right and then down in the figure. In each panel, the difference between the two lines represents the effect of the memo clerk's recommendation. When the pool memo writer's justice is proximate to Justice Blackmun, it is clear that the pool memo recommendation matters a great deal to Blackmun's clerk. Note that even when cert-worthiness is low, a recommendation to grant cert from an ideologically-proximate justice's clerk results in an average first difference of around 0.35. That effect increases by a factor of 2 when the case is considered highly cert-worthy.

[Insert Figure 1 About Here]

The other interesting aspect of Figure 1 is that the strength of the effect of the recommendation decreases precipitously as ideological distance increases. When the pool memo writer's justice is ideologically distant from Blackmun and the case is not particularly cert-worthy, the pool memo writer's recommendation has almost no effect (average first difference of around 0.10). That effect does increase with cert-worthiness, but even for highly cert-worthy cases, the effect of the pool memo recommendation is only around 0.3 when the pool memo writer's justice is ideologically distant from Blackmun.

We can also consider the independent effect of cert-worthiness here. The effect here is 0.24 which is roughly half the size of the effect this same variable had on the pool memo writer's recommendation (recall, that effect was about 0.52). Since cert-worthiness

is only one of the pieces of information that Blackmun's clerk uses, it is not surprising that its effect is smaller.

The results here, in concert with the results from the previous section, identify an interesting and predictable perceptual bias on the part of Blackmun's clerk. While the memo-writer is not shown to be influenced by strategic considerations, Justice Blackmun's clerk still discounts the recommendation offered by the pool memo writer when his or her justice is ideologically distant from Justice Blackmun.

Blackmun's Vote

Finally, we arrive at Blackmun's vote on cert, which is obviously of greatest import to our analysis. We expect that Justice Blackmun will use the advice available to him, but will do so differentially: He will rely much more on his own clerk's recommendation than that of the pool memo writer. Further, cert-worthiness should matter, but less so for two reasons. First, the system of advice from the cert pool exists expressly because the justices do not have time to acquaint themselves sufficiently well with all of the information available on every case. Second, the advice coming from Blackmun's own trusted advisor should be at least as important, if not more so, than his independent evaluation of a case's cert-worthiness, given that Blackmun trusts his advisor, to whom he delegates the task of discerning to which cases he might vote to grant cert.

We recognize that as Blackmun evaluates all the evidence available to him, he may combine the pool memo writer's recommendation and his own clerk's recommendation in any number of ways. Initially, we estimated a model that allowed for a multiplicative relationship between Blackmun's clerk's recommendation, the pool memo writer's recommendation, and the distance of the pool memo writer's justice to Blackmun. We

found that this model was not statistically different from one that does not include either the pool memo writer's recommendation or the pool memo writer's justice's distance to Blackmun. Hence, we present results from the simpler model.²⁸

Our model of Justice Blackmun's vote is shown in the third column of Table 1. A couple of interesting findings emerge. First, strategic considerations seem less important to Justice Blackmun's calculus. The lower court direction, which had a reasonably large effect on his clerk's recommendation, has no effect on Justice Blackmun's own vote. It is also clear that outcome prediction – the ideological distance between Blackmun and the Court's median – has no consistent effect either. Cert-worthiness has a similar impact on the justice as it had on his clerk. For Justice Blackmun, cert-worthiness has an effect of around 0.22. Highly cert-worthy cases have a probability of being granted cert of 0.22 higher than those that are highly un-cert-worthy, based on the objective indicators.

Blackmun's Clerk's recommendation has the biggest (and only other significant) effect on Justice Blackmun's vote – an effect of 0.41. Blackmun is much more likely to vote for cert if his clerk recommends cert, and the effect of his trusted advisor is the strongest driver of his vote. To the extent that the Black and Boyd (2011) study is comparable to ours (and we would argue that they are aimed at fundamentally different goals), our findings suggest that their discovered effect of the pool memo writer on the cert vote is channeled through the advice of the justices' own clerks. Once Justice Blackmun's clerk distills the information into a recommendation, the pool memo recommendation has no further bearing on Blackmun's decision. These results are consistent with our third

²⁸ See the Online Appendix for details.

expectation – that Blackmun will privilege his clerk’s recommendation over the recommendation of the pool memo author. In fact, Justice Blackmun discounts completely the pool memo writer’s recommendation.

In sum, this particular elite decision maker seeks and uses available advice, preferring the advice of his own advisor. That advice, in turn, matters independently and substantially to his vote choice. This is a finding that those studying advisors to Presidents, for example, have been unable to uncover so far, due to a lack of data. We expect such a process may well operate in that and in other venues as well.

While we find the results of our study compelling, there are several caveats that are relevant regarding our results. First, as mentioned above, the generalizability to other justices is an open question. While we offer evidence that the other justices behave similarly in terms of the information they seek from their clerks, the extent to which they, like Blackmun, rely on their own clerk to the exclusion of the cert pool clerk is an empirical question. Second, there is relatively little information about the clerks themselves in the model.²⁹ If particular clerks develop differential reputations for incisiveness and insightfulness in their recommendations as to cert, the extent to which their advice is heeded, either as cert pool memo author or as Blackmun clerk, may vary (and may even change over the course of their tenure, as they learn how better to influence the justices). Indeed, it may even be the case that there is variation *across* Blackmun clerks in terms of his acceptance of advice. However, given data limitations as well as the likely marginal influences these differences might represent, we argue that our model reasonably captures

²⁹ We thank an anonymous reviewer for raising this very interesting point.

the effect of the average clerk. It may well be that there is more nuance to explore in this regard, but we leave that to future, more specific analyses of the individual clerks, which is beyond the scope of the data we collected.³⁰

Conclusion

Students of the Supreme Court have spent much time considering the determinants of the vote to hear a given case, and for good reason given how important this agenda-setting power the Court wields is. However, in all of this literature, the role of the Court's advisors has been all but ignored (but see Black and Boyd 2011). Indeed, in political science more generally decisions are modeled without explicit consideration of the advice that went into them. In this article, we offer an innovative theory of advice that helps explain the justices' decisions over which cases to hear and realistically captures the process of decision-making that takes place on the High Court, and we use an innovative methodology to carefully separate the influence of the clerk from the influence of the other known determinants of cert. The clerks in our story do not have undue influence, but they offer reasoned advice, which is relied upon by their justices. This demonstrates that a justice of the Supreme Court, no less than most of us, seeking both accuracy and efficiency, uses the advice of trusted advisors in decision making. Had we information on mark-ups for other justices, we do not doubt the advice given there would be preferred by justices to the pool memo as well. It is likely that non-pool justices, like Justice Stevens, were

³⁰ The one piece of information we do have about the clerks is the law school each attended, as mentioned earlier. Unfortunately, this provides very little distinguishing information as the vast majority of the clerks went to the most elite law schools.

influenced by clerk advice as well. This is nothing like the portrait of rogue clerks attempting to influence their feeble justices presented by many critics of the law clerk institution (Woodward and Armstrong 1979; Lazarus 1998). Instead, we argue, advice is often sought when important decisions are being made. Seeking out and using such advice is an indication of a smart, careful, busy decision maker, attempting to make better and more efficient decisions. We ought to consider that advice more often in explaining the resulting decisions.

Table 1: Results of Rare Events Logistic Regression Models.

Variable (range/values)	Pool Memo Clerk	Blackmun's Clerk	Blackmun's Vote
Lower-court direction {0,1}	-0.27 (0.82, 0.20)	-1.21 (-1.65, -0.68)	0.07 (-0.41, 0.54)
Cert-worthiness (0,1)	4.58 (3.19, 6.08)	1.79 (0.34, 3.08)	1.53 (0.27, 2.83)
Abs. Distance Pool Memo Clerk to Court Median (0.01, 4.98)	-0.06 (-0.27, 0.19)		
Blackmun Distance to Median (1.682, 2.547)		0.21 (-0.53, 0.91)	-0.09 (-0.79, 0.52)
Pool Memo Writer Recommendation {0,1}		4.17 (2.91, 5.69)	0.22 (-1.06, 1.40)
Distance of Blackmun to Pool Memo Clerk (0.041, 4.560)		0.21 (-0.19, 0.60)	-0.08 (-0.42, 0.24)
Distance Blackmun-Pool Memo Clerk x PMC Recommendation		-0.53 (-1.02, -0.05)	-0.12 (-0.57, 0.28)
Blackmun's Clerk's Recommendation {0,1}			2.31 (1.82, 2.75)
Intercept	-4.30 (-5.46, -3.38)	-4.60 (-6.80, -2.60)	-3.11 (-4.82, -1.19)
PRE	0.208	0.569	0.422

N for all models is 625.

Main entries are Rare-events Logistic Regression coefficients (i.e., posterior mean values) with 95% HPD Interval below in parentheses.

Bold coefficients are those that have at least 95% of their posterior distribution on the same side of zero. This would be similar to identifying one-tailed significance at 5% in a frequentist model.

Probability cutoffs for classification in PRE were those that maximized classification success across both zeros and ones in the dependent variable.

Predicted probabilities for PRE were calculated with coefficient posterior means and posterior means of cert-worthiness.

Works Cited

- Benesh, Sara C., Saul Brenner, and Harold J. Spaeth. 2002. "Aggressive Grants by Affirm-Minded Justices." *American Politics Research* 30(3):219-234.
- Best, Bradley J. 2002. *Law Clerks, Support Personnel, and the Decline of Consensual norms on the United States Supreme Court, 1935-1995*. New York: LFB Scholarly.
- Bezanson, Randall P. 2012. "Good Old Number Three: Harry Blackmun and His Clerks." In *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Todd C. Peppers and Artemus Ward, Eds. Charlottesville: University of Virginia Press, pp. 326-341.
- Birnbaum, Michael H. and Steven E. Stegner. 1979. "Source credibility in social judgment: Bias, expertise, and the judge's point of view." *Journal of Personality and Social Psychology* 37: 48-74.
- Black, Ryan C. and Christina L. Boyd. 2011. "The Role of Law Clerks in the U.S. Supreme Court's Agenda-Setting Process." *American Politics Research* 40: 147-173.
- Black, Ryan C. and Ryan Owens. 2012. "A Built-In Advantage: The Office of the Solicitor General and the U.S. Supreme Court." *Political Research Quarterly* 66(2):454-466.
- Boucher, Robert L. and Jeffrey A. Segal. 1995. "Supreme Court Justices as Strategic Decision-Makers: Aggressive Grants and Defensive Denials on the Vinson Court." *Journal of Politics* 57: 812-823.
- Brenner, Saul and John F. Krol. 1989. "Strategies in Certiorari Voting on the United States Supreme Court." *Journal of Politics* 51: 828-840.
- Brenner, Saul and Jan Palmer. 1990. "The Law Clerks' Recommendations and Chief Justice Vinson's Votes on Certiorari." *American Politics Quarterly* 18:68-80.

- Caldeira, Gregory. 1990. "The Discuss List: Organized Interests and Agenda-Building in the Supreme Court." *Law & Society Review* 24: 807-836.
- Caldeira, Gregory A. and John R. Wright. 1988. "Organized Interests and Agenda-Setting in the U.S. Supreme Court." *American Political Science Review* 82: 1109-1128.
- Caldeira, Gregory A., John R. Wright, and Christopher J.W. Zorn. 1999. "Sophisticated Voting and Gate-Keeping in the Supreme Court." *Journal of Law Economics & Organization* 15(3):549-572.
- Caldeira, Gregory A., John R. Wright, and Christopher J.W. Zorn. 2012. "Organized Interests and Agenda Setting Revisited." Unpublished manuscript available online at <https://dl.dropboxusercontent.com/u/7698439/CWZPaper12.pdf>. (Visited March 21, 2014).
- Calvert, Randall L. 1985. "The Value of Biased Information: A Rational Choice Model of Political Advice." *Journal of Politics* 47: 530-555.
- Cameron, Charles, Jeffrey A. Segal & Donald Songer (2000). "Strategic Auditing in a Political Hierarchy: An Informational Model of the Supreme Court's Certiorari Decisions." *American Political Science Review* 94:101-116
- Chaiken, Shelly. 1980. "Heuristic Versus Systematic Information Processing and the Use of Source Versus Message Cues in Persuasion." *Journal of Personality and Social Psychology* 39(5): 752-766.
- Ditslear, Corey and Lawrence Baum. 2001. "Selection of Law Clerks and Polarization in the U.S. Supreme Court." *Journal of Politics* 63(3):869-885.
- Druckman, James N. 2001a. "Using Credible Advice to Overcome Framing Effects." *Journal of Law Economics & Organization* 17(1):62-82.

- Druckman, James N. 2001b. "On the Limits of Framing Effects: Who Can Frame?" *Journal of Politics* 63(4): 1041-1066.
- Epstein, Lee, Jeffrey A. Segal, & Harold J. Spaeth. 2007. *The Digital Archive of the Papers of Justice Harry A. Blackmun*. Available at:
<http://epstein.law.northwestern.edu/research/BlackmunArchive.html>.
- Garrison, Jean A. 2001. "Framing Foreign Policy Alternative in the Inner Circle: President Carter, His Advisors, and the Struggles for the Arms Control Agenda." *Political Psychology* 22(4):775-807.
- Greenhouse, Linda. 2005. *Becoming Justice Blackmun: Harry Blackmun's Supreme Court Journey*. New York: Times Books.
- Hanmer, Michael J. and Kerem Ozan Kalkan. 2013. "Behind the Curve: Clarifying the Best Approach to Calculating Predicted Probabilities and Marginal Effects from Limited Dependent Variable Models." *American Journal of Political Science* 57(1): 263-277.
- Huckfeldt, Robert. 2001. "The Social Communication of Political Expertise." *American Journal of Political Science* 45(2):425-438.
- Kalos, Malvin H. and Paula A. Whitlock. 2008. *Monte Carlo Methods, 2nd ed.* Weinheim: Wiley-VCH.
- Kardes, Frank. 1996. "In Defense of Experimental Consumer Psychology." *Journal of Consumer Psychology*. 5(3): 279-296.
- Kassop, Nancy. 2013. "Rivals for Influence on Counterterrorism Policy: White House Political Staff Versus Executive Branch Legal Advisors." *Presidential Studies Quarterly* 43(2):252-273.

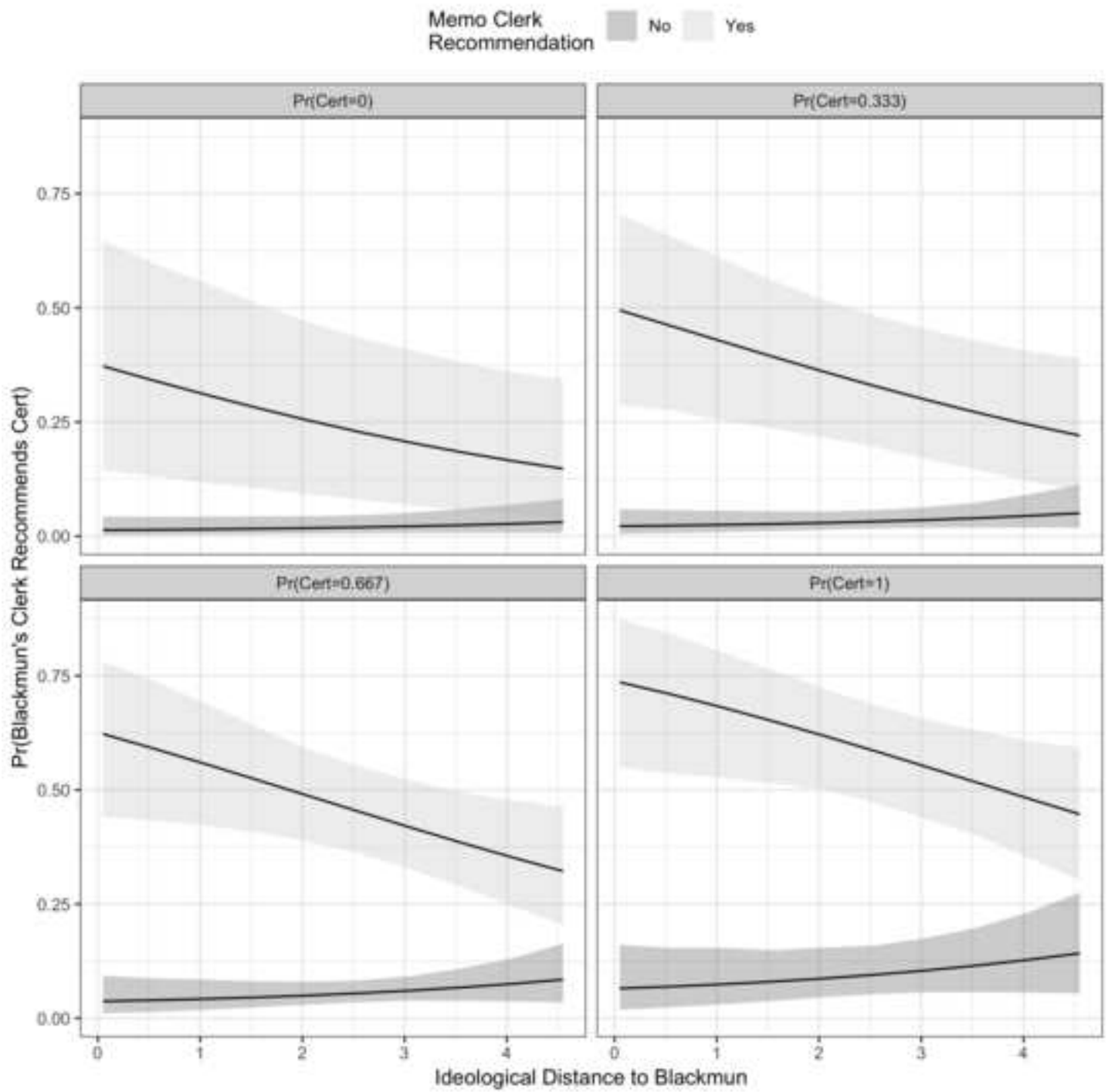
- King, Gary, Michael Tomz and Jason Wittenberg. 2000. "Making the Most of Statistical Analyses: Improving Interpretation and Presentation." *American Journal of Political Science*. 44(2): 341-355.
- King, Gary and Langche Zeng. 2001. "Logistic Regression in Rare Events Data." *Political Analysis*. 9(2): 137-163.
- Krol, John F. and Saul Brenner. 1990. "Strategies in Certiorari Voting on the United States Supreme Court." *Western Political Quarterly* 43: 335-342.
- Lazarus, Edward. 1998. *Closed Chambers: The Rise, Fall, and Future of the Modern Supreme Court*. New York: Penguin Books.
- Liptak, Adam. 2017. "Gorsuch, in Sign of Independence, Is Out of Supreme Court's Clerical Pool." *The New York Times*, May 1, 2017. Available online at <https://www.nytimes.com/2017/05/01/us/politics/gorsuch-supreme-court-labor-pool-clerks.html>. (Visited November 9, 2018.)
- Liptak, Adam. 2008. "A Second Justice Optes Out of a Longtime Custom: The 'Cert Pool'." *The New York Times*, September 26, 2008. Supreme Court Memo.
- Martin, Andrew D. and Kevin M. Quinn. 2002. "Dynamic ideal point estimation via Markov chain Monte Carlo for the U.S. Supreme Court, 1953-1999." *Political Analysis* 10(2):134-153.
- Mauro, Tony. 2018. "Unlike Gorsuch, Kavanaugh Jumps Into SCOTUS Cert Pool." *The National Law Journal*, October 11, 2018. Available online at <https://www.law.com/nationallawjournal/2018/10/11/unlike-gorsuch-kavanaugh-jumps-into-scotus-cert-pool/>. (Visited November 9, 2018.)

- McGuire, Kevin T. 1998. "Explaining Executive Success in the U.S. Supreme Court." *Political Research Quarterly* 51(2):505-526.
- Mintz, Alex and Steven B. Redd and Arnold Vedlitz. 2006. "Can We Generalize from Student Experiments to the Real World in Political Science, Military Affairs and International Relations?" *Journal of Conflict Resolution* 50(5): 757-776.
- Mondak, Jeffery J. 1990. "Perceived Legitimacy of Supreme Court Decisions: Three Functions of Source Credibility." *Political Behavior* 12(4):363-384.
- Mondak, Jeffery J. 1993a. "Source Cues and Policy Approval: The Cognitive Dynamics of Public Support for the Reagan Agenda." *American Journal of Political Science* 37(1):186-212.
- Mondak, Jeffery J. 1993b. "Public Opinion and Heuristic Processing of Source Cues." *Political Behavior* 15(2):167-192.
- O'Neil, Robert M. 2012. "Charting Civil Liberties and Protecting Free Expression: Learning From and Working With Justice William J. Brennan." In *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Todd C. Peppers and Artemus Ward, Eds. Charlottesville: University of Virginia Press, pp. 284-294.
- Owens, Ryan and Ryan C. Black. 2012. "Agenda Setting in the U.S. Supreme Court" in *New Directions in Judicial Politics*, ed. Kevin T. McGuire. City: Routledge, Taylor and Francis.
- Palmer, Jan. 1982. "An Econometric Analysis of the U.S. Supreme Court's Certiorari Decisions." *Public Choice* 39: 387-398.

- Palmer, Jan and Saul Brenner. 1995. "The Law Clerks' Recommendation and the Conference Vote On-the-Merits on the U.S. Supreme Court." *Justice System Journal* 18(2): 185-197.
- Pemstein, Daniel, Stephen Meserve and James Melton. 2010. "Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type." *Political Analysis*. 18(4): 426-449.
- Peppers, Todd C. 2006. *Courtiers of the Marble Palace: The Rise and Influence of the Supreme Court Law Clerk*. Stanford: Stanford University Press.
- Peppers, Todd C. 2012. "The Modern Clerkship: Justice Ruth Bader Ginsburg and Her Law Clerks." In *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Todd C. Peppers and Artemus Ward, Eds. Charlottesville: University of Virginia Press, pp. 391-404.
- Peppers, Todd C. and Christopher Zorn. 2008. "Law Clerk Influence on Supreme Court Decision-making: An Empirical Assessment." *DePaul Law Review* 58:51-77.
- Peppers, Todd C. and Artemus Ward. 2012. *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Eds. Charlottesville: University of Virginia Press.
- Perry, H.W. Jr. 1992. *Deciding to Decide: Agenda-Setting in the United States Supreme Court*. Cambridge: Harvard University Press.
- Provine, Doris Marie. 1980. *Case Selection in the United States Supreme Court*. Chicago: University of Chicago Press.
- Redd, Steven B. 2002. "The Influence of Advisers on Foreign Policy Decision Making: An Experimental Study." *Journal of Conflict Resolution* 48(1):69-90.

- Rehnquist, William H. 1957. "Who Writes Decisions of the Supreme Court." *U.S. News & World Report* December 13, 1957.
- Sauder, Michael, and Wendy Espeland. 2007. *Fear of Falling: The Effects of U.S. News & World Report Rankings on U.S. Law Schools*. Law School Admission Council: Grants.
- Segal, Jeffrey A. and Harold J. Spaeth. 2002. *The Supreme Court and the Attitudinal Model Revisited*. New York: Cambridge University Press.
- Spaeth, Harold J., Lee Epstein, Andrew D. Martin, Jeffrey A. Segal, Theodore J. Ruger, and Sara C. Benesh. 2015. *Supreme Court Database*, Version 2015 Release 01. URL: <http://supremecourtdatabase.org>.
- Treier, Shawn and Simon Jackman. 2008. "Democracy as a Latent Variable." *American Journal of Political Science*. 52(1): 201-217.
- Wahlbeck, Paul L., James F. Spriggs II, and Lee Sigelman. 2002. "Ghostwriters on the Court? A Stylistic Analysis of U.S. Supreme Court Opinion Drafts." *American Politics Research* 30(2): 166-192.
- Wallander, Zachary. 2014. *SCOTUS on Cert: A Look at the Blackmun Papers*. Unpublished PhD Dissertation, University of Wisconsin – Milwaukee, Milwaukee, WI.
- Wallander, Zachary and Sara C. Benesh. 2014. "Law Clerks as Advisors: A Look at the Blackmun Papers." *Marquette Law Review* 98(1):43-73.
- Ward, Artemus. 2012. "Making Work for Idle Hands: William H. Rehnquist and His Law Clerks." In *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Todd C. Peppers and Artemus Ward, Eds. Charlottesville: University of Virginia Press, pp. 350-390.

- Ward, Artemus and David L. Weiden. 2006. *Sorcerers' Apprentices: 100 Years of Law Clerks at the United States Supreme Court*. New York: New York University Press.
- Woodward, Bob and Scott Armstrong. 1979. *The Brethren: Inside the Supreme Court*. New York: Simon & Schuster.
- Worthen, Kevin J. 2012. "Shirt-Tales: Clerking for Byron White." In *In Chambers: Stories of Supreme Court Law Clerks and Their Justices*, Todd C. Peppers and Artemus Ward, Eds. Charlottesville: University of Virginia Press, pp. 303-313.
- Yaniv, Ilan. 2004a. "Receiving other people's advice: Influence and benefit." *Organizational Behavior and Human Decision Processes* 93:1-13.
- Yaniv, Ilan. 2004b. "The Benefit of Additional Opinions." *Current Directions in Psychological Science* 13(2): 75-78.



Advisors to Elites: Untangling their Effect
Online Appendix

Zachary Wallander, Sara Benesh and David Armstrong

Appendix A. Measure of Cert-worthiness.

One of the most flexible ways to describe the relationship between a set of observed covariates and an outcome variable is with a Bayesian Adaptive Regression Tree (BART) (see Chipman, George and McCulloch (2010) for a discussion). These models allow for arbitrary non-linearity and interactivity in the covariates. As a means for describing and discovering relationships, it is an ideal tool. Software is readily available for estimating these models in R (Chipman and McCulloch, 2014). The flexibility of these models comes at a cost of both explaining the results and understanding the functional form of the relationships between the covariates and the outcome. As is usually the case, if little or no difference exists between the predictions from this model and the predictions from a simpler parametric model, the latter are preferred.

Here, we estimate both the BART model and a logistic regression of all of the covariates on whether or not a case was granted cert. Each of the variables in our model is a binary variable. Table A1 gives the proportion of ones for each covariate given the different values of the outcome.

Since the BART model does not have coefficients, the best way to compare them is to compare the predictions. First, we can calculate \bar{p}_{BART} as the posterior mean probability for each of the 726 predictions and \bar{p}_L as the posterior mean probability for each of the 726 predictions. The Pearson correlation between \bar{p}_{BART} and \bar{p}_L is 0.962 – suggesting that one is nearly a linear transformation of the other. The plot of the two predictions against each other

are in Figure A1. There are 12/726 cases that do not follow the general pattern. Their docket numbers are identified beside the points. These are cases that have only middling probabilities of being granted cert in the parametric logistic regression, but were actually granted cert by the court. The BART model is better at picking up this distinction. Overall, however, the two predictions are very closely related.

The above analysis used the posterior mean probabilities. We could also evaluate the overlap between the logistic regression posterior distribution for each prediction and the corresponding posterior from the BART model (Gimenez, Morgan and Brooks, 2009; Korner-Nievergelt and Robinson 2015). This measure evaluates the extent to which the two posterior distributions overlap. The measure is bound in the interval [0,1] with higher values meaning bigger regions shared by the both posteriors. Of the 12 unusual observations, 10 had overlap coefficients less than 0.05. The other two had overlap coefficients around 0.3. Of the remaining points, the smallest overlap coefficient is 0.41. Approximately 96% of observations have overlap coefficients greater than 50%. The average overlap coefficient is around 0.69. Thus, by and large, the posterior cover quite similar ranges. The one problem with this method is that the posterior probabilities for the unusual cases are not unimodal. This method breaks down somewhat in this case.

There is also another way of measuring overlap in posterior distributions. We simply calculate $\Delta p = p_L - p_{BART}$, which is then draws from the posterior distribution of the difference. In this case, the lowest probability of overlap is around 0.16 – indicating no interesting statistical differences between the two methods.

These two pieces of information lead us to conclude that the two models do not produce sufficiently different predictions to encumber our analysis with the more complicated model. The predictions from the logistic regression model are a sufficiently good measure of cert-worthiness.

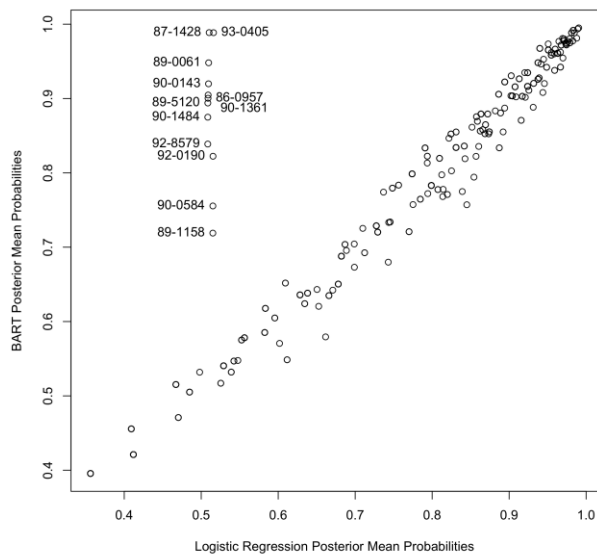
Table A1: Descriptive Statistics of Covariates

Variable	Cert Not Granted	Cert Granted
Lower court direction (0=Conservative, 1=Liberal)	0.28	0.52
Lower Court Dissent (0=No, 1=Yes)	0.27	0.32
Abortion at Issue (0=No, 1=Yes)	0.00	0.01
Death Penalty Involved (0=No, 1=Yes)	0.07	0.07
Alleged Conflict (0=No, 1=Yes)	0.63	0.79
Constitutional Claim (0=No, 1=Yes)	0.10	0.21
Lower Court Disagreement (1=Circuit Court Reversed District Court, 0=otherwise)	0.21	0.37
US is a Petitioner (0=No, 1=Yes)	0.02	0.07
True Conflict (0=No, 1=Yes)	0.17	0.54

Amicus Brief in Favor of Cert (0=No, 1=Yes)	0.11	0.18
Amicus Brief Against Cert (0=No, 1=Yes)	0.00	0.01

Entries are the proportion of ones of each variable given cert status

Figure A1: Posterior Mean Probabilities*



* Docket Numbers are identified for the 12 unusual cases.

By means of another robustness check, we estimate the three final models above using the BART posteriors for cert-worthiness. Table A2 shows the comparison of the two sets of coefficients. You can see that they are remarkably similar across the two methods. Thus, any misgivings regarding the discrepancies in cert-worthiness across the two methods should be allayed by the similarity evidence in Table A2 for all models.

Table A2: Results of Rare Events Logistic Regression Models.

Variable (range/values)	<u>Pool Memo Clerk</u>		<u>Blackmun's Clerk</u>		<u>Blackmun's Vote</u>	
	Logit	BART	Logit	BART	Logit	BART
Lower-court direction {0,1}	-0.27	-0.36	-1.21	-1.24	0.07	0.02
	(0.82, 0.20)	(-0.89, 0.13)	(-1.65, -0.68)	(-1.73, -0.74)	(-0.41, 0.54)	(-0.45, 0.54)
Cert-worthiness (0,1)	4.58	5.08	1.79	2.03	1.53	1.70
	(3.19, 6.08)	(3.72, 6.67)	(0.34, 3.08)	(0.67, 3.54)	(0.25, 2.81)	(0.27, 3.14)
Abs. Distance Pool Memo Clerk to Court Median (0.01, 4.98)	-0.06	-0.07				
	(-0.27, 0.19)	(-0.29, 0.18)				
Blackmun Distance to Median			0.21	0.19	-0.08	-0.07
(1.682, 2.547)			(-0.53, 0.91)	(-0.59, 0.91)	(-0.79, 0.52)	(-0.79, 0.66)
Pool Memo Writer Recommendation {0,1}			4.17	4.17	0.22	0.23
			(2.91, 5.69)	(2.97, 5.74)	(-1.06, 1.40)	(-1.04, 1.44)
Distance of Blackmun to Pool Memo Clerk (0.041, 4.560)			0.21	0.21	-0.08	-0.08
			(-0.19, 0.60)	(-0.18, 0.60)	(-0.42, 0.24)	(-0.42, 0.22)
Distance Blackmun-Pool Memo Clerk x PMC Recommendation			-0.53	-0.53	-0.12	-0.13
			(-1.02, -0.05)	(-1.00, -0.05)	(-0.57, 0.28)	(-0.52, 0.33)
Blackmun's Clerk's Recommendation {0,1}					2.31	2.29
					(1.82, 2.75)	(1.80, 2.73)
Intercept	-4.30	-4.62	-4.60	-4.74	-3.11	-3.16
	(-5.46, -3.38)	(-5.79, -3.50)	(-6.80, -2.60)	(-6.85, -2.59)	(-4.82, -1.19)	(-4.91, -1.17)

N for all models is 625.

Main entries are Rare-events Logistic Regression coefficients (i.e., posterior mean values) with 95% HPD Interval below in parentheses.

Bold coefficients are those that have at least 95% of their posterior distribution on the same side of zero. This would be similar to identifying one-tailed significance at 5% in a frequentist model.

Appendix B.

Recall, from fn. 23 in the main text, that we are estimating:

$$p(\beta|x, y) = \int \int p(\beta|x, y, \hat{c}, \tau)p(\tau)p(\hat{c}|c, Z)d\tau d\hat{c}$$

with Monte Carlo integration to account for uncertainty in τ and cert-worthiness where \hat{c} is our variable of cert-worthiness (predictions from a logistic regression model where the actual cert decision c , is the outcome), Z is the design matrix for the set of variables thought to influence cert-worthiness, y is the actor's decision, and x is the set of other model regressors.

Our model specification for the Blackmun vote model includes lower court direction, the distance from Blackmun to the Court median and cert-worthiness. In addition, we want to evaluate whether the pool memo writer's recommendation matters (and if so, if it matters conditionally on the memo clerk's justice's distance to Blackmun). So, in addition to the covariates above, in model B1, we include Blackmun's clerks's recommendation (BC), the memo clerk's recommendation (MC), the distance from the memo clerk's justice to Blackmun (MD) along with all of the two way and three-way interactions ($MC \times BC$, $MC \times MD$, $BC \times MD$, $BC \times MC \times MD$). In Model B2, in addition to the covariates mentioned above, we include only (BC , MC , MD , $MC \times MD$). So, in total, there are four fewer terms in model B2 than model B1.

Since we are not estimating a single model, rather we are estimating a number of models to address and account for uncertainty in τ and \hat{c} , we cannot use the conventional likelihood ratio or Wald test to evaluate differences across nested model specifications.¹ We must, then, appeal to a different testing mechanism. First, we gather the log-likelihood from each model for each iteration of the Monte Carlo simulation. Under the null hypothesis, two times the difference between these two should follow a χ^2 distribution with 4 degrees of freedom. The observed χ^2 values range from around the 0th to the 60th percentiles of the theoretical distribution under the null hypothesis, so it suggests that there is no interesting difference between the two models.

Finally, we could look at the individual log-likelihoods (akin to what Clarke (2007) suggests). Here, we see that all of the simulations more of the individual log-likelihoods favored the simpler model rather than the more complex model, though in some the difference was quite small. Under the null hypothesis that the two models are equally good (i.e., that roughly half of the individual log-likelihoods are higher for each model), we would expect at least 46% of the observations to be better predicted by each model (i.e., no more than 54% of observations having higher log-likelihoods for the better model). The more complicated model

¹ Using posterior means of τ and \hat{c} as plug-in estimates of the variable quantities, we could use the conventional methods of nested model comparison. Here, the likelihood ratio test has a $\chi^2 = 6.41$ on 4 degrees of freedom with a p-value of 0.093. The Wald test has $\chi^2 = 5.84$ on 4 degrees of freedom with a p-value of 0.211. Thus, the two models are not interestingly different. We get a slightly better estimate by using the posterior distribution of the coefficients from the full model and assuming the posterior distribution is multivariate normal. In this case, the Wald test χ^2 is 6.13 on 4 degrees of freedom with a p-value of 0.189. Further, the predictions from these two models correlate at 0.983.

has a smaller proportion than .46 of higher individual log-likelihoods around 24% of the time.

This suggests that, on average, we're better off using the simpler model.

References

- Chipman, H. and McCulloch, R. (2014) BayesTree: Bayesian Adaptive Regression Trees. R package version 0.3-1.2, url: <http://CRAN.R-project.org/package=BayesTree>.
- Chipman, H., George, E., and McCulloch R. (2010) Bayesian Additive Regression Trees. *The Annals of Applied Statistics*, 4,1, 266-298
- Clarke, Kevin. 2007. "A Simple Distribution-Free Test for Nonnested Hypotheses." *Political Analysis* 15(3): 347-363.
- Gimenez, O, Morgan, B.J.T. and Brooks, S.P. (2009) "Weak identifiability in models for mark recapture-recovery data. Modelling Demographic Processes in Marked Populations" in Thompson, D., Coch, E. and Conroy, M. eds. Modeling Demographic Processes in Marked Populations. Springer.
- Korner-Nievergelt, F. and Robinson, R. 2015. birdring: Methods to Analyse Ring Re-Encounter Data. R package version 1.3. URL: <http://CRAN.R-project.org/package=birdring>