How rational are justices on the Supreme Court of the United States? Doctrinal considerations during agenda setting

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Abstract
Justices on the US Supreme Court are rational and therefore strategic policymakers. Yet, how rational are they? How far into the future would their strategic considerations reach? Due to potential influence on both policy and doctrine, ceteris paribus they find opinion authorship desirable; when selecting cases, in addition to thinking about legal issues and the final disposition, justices strategically consider opinion crafting. To overcome the measurement error inherent to the estimation of rational behavior of the type proposed here, the Simulation Extrapolation protocol is introduced. There is strong support for the notion of doctrine-minded justices at cert. The social implications of such rational behavior are far-reaching; employing this strategy, over the course of her time in office, a justice would be able to considerably influence several policy and legal issues. In closing, implications of strategic behavior on the individual-justice level for the constitutional position of the Court within American society are discussed.

Keywords
agenda setting, decision making, judicial writ of certiorari, rational behavior, Supreme Court of the United States
Introduction

That courts are passive political players is an almost undisputed premise in the judicial politics literature. Rosenberg (1991) contends that due to its passive position within American government, the Supreme Court of the United States (USSC) is a hollow hope for those who strive for social change. Having neither will nor force, the judiciary department is the least dangerous branch. Yet, Frankfurter and Landis (1928) open their Study on the Federal Judicial System with the following assertion, equally accurate then as it had been in Tocqueville’s time and as it is today: ‘No other country in the world leaves to the judiciary the powers which it exercises over us.’

The political significance of the puissant USSC is hard to reconcile with the passivity argument. A possible explanation for the Court’s ability to preserve its position in American politics, and one that would suggest a more proactive part for this key institution, is based on its gate-keeping prerogative. Part of the reason why the USSC is unique in a comparative perspective is that unlike many of its counterparts worldwide, pursuant to the Judiciary Act of 1925, it can set its own agenda. In a free litigation market where legal entrepreneurs do not miss an opportunity to litigate (Baird, 2004; 2007), all major (as well as minor) issues are brought to court sooner rather than later. In light of the multitude of requests for review filed each term, rather than taking a passive role, the Court may pick the right vehicles to serve its goals. For this to be the case, on the micro, individual level, justices are expected to be rational (and ergo strategic) and choose cases to audit based on anticipated policy upshots. In that sense, it is the justices’ rational behavior that is conducive to the Court’s central role in American politics and society.

Justices recognize the policy consequences of their discretionary docket. Chief Justice Warren asserted that the purpose of the Judges’ Bill was ‘to permit the Court not to achieve control of its docket but also to establish ... national priorities in constitutional and legal matters’. Being strategic policymakers (Epstein and Knight, 1998), it is likely that justices populate their docket with an eye to the national agenda. Cases chosen, thus, are those that would take the law of the land in the directions justices see fit. Along the lines of Epstein and Knight (1998), I think of strategic bahavior as inherent to rationality. Thus, I assume that justices are rational, and are therefore, strategic.

Opinions are an essential component of justices’ policymaking toolbox. Opinion authors exercise control over policy and doctrinal outcomes (Bonneau et al., 2007). The Supreme Court of the United States has a discretionary docket, a fact that influences the opinion writing process as
well, I argue. A writ of certiorari is issued by the Court, when at least 4 of the 9 justices choose to audit a case from a lower court. This is the Rule of Four. Given the fact that only one in every one hundred requests for review is granted, the writ of certiorari is of immense consequentiality. With respect to opinion writing, the key puzzle concerns the reach of justices’ rational thinking when they set their own agenda. More specifically, the research question in this paper is whether, when voting on whether to issue a writ of certiorari (cert for short), justices consider whether they will become the authors of the opinion (Hammond et al., 2005; Hartnett, 2000). Justice White’s behavior in *Doe v. McMillan*, a case from the Court’s October term 1973, is a good illustration. While being in the process of writing the opinion in *Gravel*, Justice White acts to grant the petition for certiorari in *Doe v. McMillan*. In a memo circulated to the brethren, he writes ‘*Doe v. McMillan* was held for *Gravel*… The case (*Doe*) deals at least in part with issues not reached by *Gravel* and I would grant the petition for certiorari.’ Evidently, White identifies in *McMillan* another good vehicle for the Speech or Debate Clause doctrine he is in the process of developing as opinion author in *Gravel*. He thus acts to grant this case where he will ultimately pen the majority opinion as well. Being sufficiently rational to predict the dispositional outcome, and given his legal expertise, White was in a position at the time of cert to strategically think about the doctrinal upshot generally, and in particular about opinion authorship.

The research question is whether strategically considering opinion authorship at cert is systematic. This type of strategic behavior on the micro, individual level, could in the aggregate take away much of the passive quality scholars traditionally ascribe to the Court. Such a position makes justices better suited to influence political and social realities in an active way. They can strategically plan to select the vehicles that would maximize their ability to take advantage of the tool they master best – crafting the law of the land. We know that justices act to serve their political preferences (Segal and Spaeth, 2003) and that they do so to an extent comparable to that of elected officials (Segal et al., 2011). It is, therefore, reasonable to expect them to behave strategically and vote on cert with opinion authorship in mind.

**Dispositions, doctrine and the decision on certiorari**

Pursuant to the Supreme Court Case Selections Act of 1988, under modern day jurisdiction in most types of cases the discretionary writ of certiorari is necessary for review by the US Supreme Court. When deciding whether to grant review, Justices consider various aspects of the petition. These include a conflict between the circuits (Sturley, 1989), dissenting opinions on the
lower court and other aspects of the decision on the lower court (Hellman, 1985; Long, 1984; Staudt, 2005), whether there is a civil liberties or economic issue, the number of amicus curiae briefs, and the participation of the Solicitor General, among others (Lawless and Murray, 1997; Smith, 1999, 2001; Tiberi, 1993). Some of those guides are specified in Part III Jurisdiction on the Writ of Certiorari in Rules of the US Supreme Court. Yet, the verbiage in the Rules (most importantly Rule 10) is not crisp. As the Court has been willing to maintain as wide a range of action as possible, this ambiguity is anything but inadvertent (Perry, 1991; Provine, 1980).

Some work analyzes cert votes as strategic (Caldeira et al., 1999; Schubert, 1959; Songer, 1979; inter alia). Rational, and therefore, strategic behavior on the part of justices happens when they look down the decision tree, and plan their actions accordingly so as to maximize utility (Epstein and Knight, 1998). That is, when making decisions, they consider what is likely to happen next.² Most of this work examines the extent to which political goals direct the agenda setting process.

In most of the strategic agenda-setting literature, political goals are narrowly defined as the final disposition. This is true for a work that examines liberal justices’ decisions in the 1940s (Schubert, 1959) and for a host of studies that examine different possible strategies (Brenner, 2000; Krol and Brenner, 1990; Linzer, 1979; Teger and Kosinski, 1980; Ulmer, 1972, 1979; error correction³ in Baum (1985); prediction strategy⁴ in Palmer (1982) and Brenner (1979); and majority strategies⁵ in Baum (1977)). Other theories deal with cues justices might use (Tanenhaus, 1963⁶), or combine strategic notions with ideas from cue theory (Armstrong and Johnson, 1982; Songer, 1979). Finally, Perry (1991) discusses aggressive grants and defensive denials (see also Caldeira et al., 1999). There is evidence to show that justices are semi-strategic when casting their vote on the Court’s agenda (Boucher and Segal, 1995). Importantly, the notion that the strategic goal during cert is the final disposition is common to all the studies mentioned so far.

The final disposition, however, is an important, yet not the only product of the Court. The Judiciary Act of 1925 changed the decision-making environment on the Court (Walker et al., 1988). By construction, opinions were a major vehicle in achieving the goal of the Act, which was granting the Court a more comprehensive decision power over the major political, social and economic questions of the day. Thus, a link between the discretionary docket and opinions was built into the reformed institutional design of the Court.

A major vehicle to produce law is the opinion, where policy preferences are articulated via legal parlance (Friedman, 2006). Opinions are the place for justices on the majority and for the opinion author in particular, to
deliberate ideas, emphasize certain issues or points, clarify legal questions and raise others, send signals to lower courts and external players with respect to doctrinal changes they would welcome, and interject legal nuances consequential to the evolution of constitutional law and jurisprudence in general.

Since the precipitous decline in the number of opinions per term in the early 1940s, the Court ceased to deal with cases as cases. As Douglas put it in *Berman v. Parker*: ‘We do not sit to determine whether a particular housing project is or is not desirable’. Justices care about the law, they strive to establish doctrines, form jurisprudence and set policy (Bueno de Mesquita and Stephenson, 2002; Lax, 2007). Which party should win is not always as important as the legal, constitutional, and policy ramifications of the opinion (Hartnett, 2000). Rational justices, I argue, would strategically consider this goal. This would have implications for the Court’s agenda as well as for its role in society. Granted, opinions and merits votes are interconnected. Thus, if justices make cert decisions strategically, when selecting cases for review they plausibly think about interrelated dispositional and doctrinal upshots simultaneously.

The merits vote has implications of these two types – dispositional and doctrinal. Firstly, the final disposition is determined. I refer to the majority contingent voting together on the merits as the dispositional majority. This majority faces a cooperation problem – the public good they share is the determination of the final disposition. The doctrinal implications of the merits vote stem from opinion assignment. The assignee needs to command a doctrinal majority, which is the group of a minimum of five justices joining the majority opinion and thereby turning it into a binding legal precedent. Each of the justices on the majority has her own ‘ideal’ opinion. Jointly choosing between the equilibria (i.e. the possible majority opinions) is the coordination problem the doctrinal majority faces (Calvert, 1995). I argue that when selecting cases for review, as at other stages of their decision making process, justices are rational (Hammond *et al*., 2005; Maltzman *et al*., 2000). They, therefore, consider their future moves strategically. The key point here is that justices’ strategic thinking is not limited to the cooperation problem the dispositional majority will face. They are rational, and will thus also consider their potential influence on the solution to the coordination problem and its doctrinal implications, and cast their cert vote accordingly (Cordray and Cordray, 2004). When the Court exercises its gatekeeping function, the individual justices act in a rational fashion – they consider their future goals, including opinion writing, before casting their vote on certiorari.

Drawing an analytical distinction between the interrelated dispositional and doctrinal aspects of decision-making is important for the discussion of
rational behavior during cert and is warranted given justices’ behavior. Perry (1991, page 165) indicates that although bargaining on merits votes is unseemly, accommodation during opinion writing is not. What is more, often justices are of the same mind on the final disposition but are deeply divided over legal issues. First Amendment Exercise and Establishment decisions are a case in point. The Religion Establishment and Exercise Clauses read: ‘Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof …’ Those clauses are the basis for freedom of religion in the American constitutional order. The Court has been called repeatedly to expound the meaning of those clauses with respect to a variety of legal and political questions. When interpreting these Clauses in its rulings, the Court expounds the meaning of those constitutional provisions. In Religion Establishment and Exercise cases, disagreements between justices often revolve around doctrinal outcomes rather than over the final disposition. To be sure, in some of the religion cases, final disposition was unanimous, but the doctrinal disputes were still bitter. For example, in Lamb's Chapel the justices were unanimously against allowing a school district to refuse access to school premises to a church. Yet, the legal rationales offered by the members of the Court to support this decision (in separate opinions filed in this case) varied considerably.

Justices consider the opinion during any other stage of the process (e.g. during oral arguments (Johnson, 2004), and as a part of the collegial game (Maltzman et al., 2000)). In addition, during cert justices consider future actions even of other branches (Epstein et al., 1999). Thus, in addition to the vote on the merits, opinions and opinion writing are ‘hot commodities’ conceivably considered at the time of cert. More specifically, given the pivotal role of the opinion author (Bonneau et al., 2007; Maltzman et al., 2000), justices are expected to consider authorship when casting a vote on cert. Even assuming that scholars used dispositions as a crude gauge to capture a more general strategic behavior during cert, if justices consider opinion writing strategically, such an empirical approach falls short of analyzing the full array of the rational thinking justices employ during case selection and before they decide whether to grant review.

Although strategic judicial behavior on the inter-branch level is contested theoretically (Segal, 1997; Segal and Spaeth, 2003) that justices are particularly strategic during the collegial game is well substantiated (Epstein and Knight, 1998; Maltzman et al., 2000; Murphy, 1964). Decision-making on the Court is a repeated game with a limited number of players. Consequently, focal points (Shelling, 1960) shrink the number of likely coordination solutions, which in turn facilitates rational thinking and strategic behavior. Accordingly, given knowledge about their own expertise, outcome prediction strategy
virtually amounts to justices’ ability to predict authorship (Brenner and Spaeth, 1986). Predicting the dispositional majority correctly more often than not comes very close to foreshadowing opinion assignment. Finally, certain formal models confirm that the institutional platform on the Court is conducive to strategic behavior of exactly this type (e.g. Hammond et al., 2005).

Data and methods

*How to estimate in the presence of truncation and measurement error issues*

The research question is whether Supreme Court justices’ rationality reaches beyond the final disposition; I examine whether justices consider their cert vote in light of their likelihood of becoming opinion authors. The unit of analysis is the vote of an individual justice. Estimating a model in which the vote on cert is the dependent variable and opinion writing is a predictor (e.g. Boucher and Segal, 1995) poses two major estimation problems: measurement error, inherent to estimating strategic behavior, and truncation of data due to the winnowing of approximately 97% of the requests for review. The two estimation problems combine when in denied cases researchers do not have a value for the predictor since opinion was never delivered.

Overcoming the truncation problem is made possible thanks to the Burger Court Expanded Database, which includes data for lower court decisions for a stratified sample of denied cases. To deal with the potential truncation issue, both denied and granted cases are used for the main analyses in this study.

As for measurement error, over time, justices learn which factors known at cert are indicative of results in later stages of the decision-making process. Given knowledge of the brethren, the facts of the case and the Court’s internal institutions, the justices have conditional probability distributions for dispositional and doctrinal outcomes. For instance, given the issue area, they would have a probability distribution of their likelihood to write in the case. Since a great deal of what is to happen in later stages of the decision-making process is unknown, rational thinking during case selection uses inherently error-prone predictors.

Justices have probability distributions over future events in the multi-stage decision making process on the Court. Some of those events (e.g. the crafting of the law as a part of the opinion writing process) are their strategic goals. Hence, justices have probability distributions of their likelihood of achieving their strategic goals. Being rational for the justices, therefore, entails deciding about actions in the present (how to vote on cert) based on
data that include error (what they know about the future is not certain, it is measured with error). Based on their experience, and given the fact that they play a repeated game (deciding cases) with other repeated players (their colleagues on the Court), they have the ability to incorporate the error into their decision calculus. In order to make strategic choices in a way that would serve their interests (setting policy closest to their ideal point), the inherent error is built into their strategic calculations. The literature indicates that the justices on the Supreme Court are often able to successfully act in a strategic fashion. They often act strategically and do so in a systematic way (Epstein and Knight, 1998; Hammond et al., 2005; Maltzman et al., 2000). However, to empirically test the theoretical contentions offered here about the strategic behavior on the part of the justices, we need to overcome the potential attenuation of the coefficients due to measurement error. To empirically test the theory offered here, therefore, we are in need of an estimation model that produces accurate estimates even in the presence of error in the measurement of the predictors. We need an estimation protocol that, somewhat like the justices themselves, incorporates the error when estimating the relation between opinion authorship, the error-prone predictor, and the vote on cert, the outcome variable.

Striving to find the best fit between a statistical estimation model and the substantive question, we find ourselves in the province of measurement error models. A particularly appropriate model from that category is the Simulation Extrapolation (SIMEX) protocol introduced here (Carroll and Stefanski, 1990, 1994; Carroll et al., 1996, 2006; Cook and Stefanski, 1994; Hardin and Carroll, 2003a; 2003b; Hardin et al., 2003a; 2003b; 2003c; Stefanski and Cook, 1995).

The SIMEX protocol

In this section I succinctly introduce the SIMEX protocol. Let $Y$ denote the dichotomous dependent variable, vote on cert, and $U$ the true value of the predictor of interest, opinion writing, which is an error-prone independent variable. The appropriate model is a logistic regression.

$$Pr(Y = 1) = H(\beta_o + \beta_U U)$$

The error stems from the inability to perfectly predict opinion authorship. Instead of $U$, therefore, the measure for each individual $i$ is $X_i$, with $E_i$, the measurement error for each individual $i$, distributed normally.

$$X_i = U_i + E_i$$
Of interest is the regression model of $Y$ on $U$:

$$E(Y \mid U) = f(U, \beta)$$

Yet, the observed data is $(Y_i, X_i), i = 1, \ldots, n$ and the regression model in this data is different:

$$E(Y \mid X) \neq f(U, \beta)$$

By definition the least squares estimate of the slope is:

$$\beta = \frac{\sigma_{y,u}}{\sigma_u^2}$$

The numerator of this term is measured in the observed data as $S_{y,x}$, which is the covariance of $Y$ and $X$, and since by definition $X$ is the sum of $U$ and the measurement error $E$, the following holds:

$$S_{Y,U} = \text{cov}(Y, X) = \text{cov}(Y, U + E)$$

In line with the properties of the measurement error mentioned above, $E(E) = 0$. It thus follows that the covariance of $Y$ and $X$ is the same as that of $Y$ and $U$:

$$\text{cov}(Y, U + E) = \text{cov}(Y, U)$$

As for the variance in $X$, it is:

$$S_x^2 = \text{var}(X) = \text{var}(U + E) = \sigma_U^2 + \sigma_E^2$$

It, therefore, follows that the coefficient for the variable of interest is:

$$\beta^* = \frac{\sigma_{y,u}}{\sigma_U^2 + \sigma_E^2}$$

Thus, the coefficient for the variable of interest is attenuated. Instead of $\beta_U$, we get $\beta^*$, which is a function of $\lambda$, the attenuation coefficient:

$$\frac{\beta_U \cdot \sigma_U^2}{\sigma_U^2 + \sigma_E^2} = \frac{\sigma_U^2}{\sigma_U^2 + \sigma_E^2} \cdot \beta_U = \lambda \beta_U$$
The result of the measurement error is thus attenuation of the coefficient. Instead of estimating $\beta_U$, the coefficient is a multiplication of $\beta_U$ and what is known as the attenuation coefficient or attenuation factor:

$$\lambda = \frac{\sigma_U^2}{\sigma_U^2 + \sigma_E^2}$$

$\lambda$ is the ratio of the variance in $U$ to the variance in $X$. When the amount of measurement error is substantial, the variance in $X$ increases. The ratio is thus closer to zero and the resulting attenuation is substantial. Conversely, minimizing the measurement error results in a ratio close to 1, which entails little to no attenuation. Along the same lines, when the variance of $U$ increases the bias decreases. $\lambda$ is thus also known as the reliability ratio.

Several methods to deal with measurement error appear in the literature (Carroll and Stefanski, 1990; Davidian et al., 1988; Rudemo et al., 1989). Since the dependent variable is dichotomous (Grant / Deny) and thus the canonical link function is a logistic regression, the more recent approach of simulation extrapolation is employed here (SIMEX in Carroll et al., 2006).

Following is an outline of Simulation Extrapolation in the context of parametric models with a single error-prone predictor. Application to models with more than one such variable (which are used in the analyses below) is mathematically similar, though more complicated. In the presentation of this protocol this part of the paper largely follows in the footsteps of Cook and Stefanski (1994) and Carroll et al. (2006).

As before, let $Y$ be a response variable, $U$ is the error-prone regressor, and $X$ is the measured predictor. $V$ is an error-free independent variable. Thus, for observed data $\{Y_i, V_i, X_i\}_1^n$:

$$X_i = U_i + \sigma Z_i$$

$\sigma Z_i$ now represents $E_i$, where $Z_i$ is a standard normal random variable independent of $U_i$, $V_i$ and $Y_i$. $\sigma^2$ is the known measurement error variance. $T$ denotes the functional that maps the data set into $\Theta$, the parameter space.

We can thus refer to a true estimate and a naïve one, where:

$$\hat{\theta}_{TRUE} = T\left(\{Y_i, V_i, U_i\}_1^n\right)$$

$$\hat{\theta}_{NAIVE} = T\left(\{Y_i, V_i, X_i\}_1^n\right)$$
\( \hat{T}_{\text{TRUE}} \) is a random vector, which is not an estimator in the strict sense since \( U_i \) is unknown. Crucially important for the simulation component is \( X_{b,i}(\lambda) \). In order to be able to later manipulate the size of the error term for simulation and extrapolation, Cook and Stefanski (1994) define \( X_{b,i}(\lambda) \) as:

\[
X_{b,i}(\lambda) = X_i + \lambda^{\frac{1}{2}} \sigma Z_{b,i}
\]

The pseudo errors, \( \{Z_{b,i}\}_{i=1}^n \), are mutually independent, independent of \( \{Y_i, V_i, U_i, X_i\}_{i=1}^n \) and identically distributed standard normal random variables. Although when \( \lambda \) is equal to 0, \( \hat{\beta}(0) = \hat{\beta}_b(0) = \hat{\beta}_{\text{NAIVE}} \), determination of \( \hat{\beta}(\lambda) \) for \( \lambda \) greater than 0 is generally not feasible. The simulation component does just that by generating for each value of \( \lambda \) a distribution of independent measurement error vectors, \( \left\{\{Z_{b,i}\}_{i=1}^n\right\}_{b=1}^B \).

Taking the average over multiple simulations allows the researcher to estimate the extra bias due to contamination (Carroll et al., 2006). Once the simulation experiments establish the functional that maps measurement error variance (the manipulated size of the measurement error) onto estimator values, the extrapolation component extrapolates back to \( \lambda = -1 \). This is the ideal case of no measurement error, which yields the simulation–extrapolation estimator – \( \hat{\theta}_{\text{SIMEX}} \). Carroll et al. (2006) note: ‘The key idea underlying SIMEX is the fact that the effect of measurement error on an estimator can be determined experimentally via simulation’ (page 98, italics in the original). As will be demonstrated soon, this can be easily achieved, for instance by using graphical displays. These displays help both in motivating the use of SIMEX over alternative estimation protocols, and in elucidation of the analysis in the measurement error model. In sum, if justices are able to rationally anticipate opinion writing at the time of cert, they have to incorporate the error into their strategic thinking and correct for that error. The operation of the SIMEX protocol is an empirical reflection of these processes. With the simulations, the error is incorporated into the calculation of the estimates, and in turn the extrapolation component produces estimates free of attenuation.

The level of analysis is the individual justice’s vote in a case. The dependent variable is the vote cast on cert. The effects of three strategic independent variables are examined – authorship, reversal and winning on the merits. The key hypothesis for this study is that justices will vote to grant review when they are more likely to write the opinion. Additionally, according to Reversal Strategy (Epstein and Knight, 1998, inter alia), during cert justices would tend to grant review when planning to reverse.
Finally, justices would grant review when they believe they are going to be on the dispositional majority (Baum, 1977). In sum, based on information available at cert, justices predict authorship, reversal and majority. Acting rationally, justices vote in accordance with those predictions.

A crucially important piece of information for this decision is the issue area. This is the legal context in which the decision appears (e.g. criminal procedure, civil rights, due process). Of interest as predictors, thus, are the conditional probabilities of writing given the issue area: \( P(\text{writing} \mid \text{issue area}) \), of winning given issue area; \( P(\text{winning} \mid \text{issue area}) \) and of Affirm conditional on both the issue area and the direction of the decision on the lower court; \( P(\text{affirm} \mid \text{issue area} \& \text{direction of decision on lower court}) \).

Since by definition all are based on predictions, those are error-prone measures. I expect justices to be more likely to vote to grant if they expect to be opinion authors. In addition, justices would be interested in auditing a case when they expect to win on the merits. Finally, they should be less likely to vote to grant when planning to affirm the decision of the lower court. Model I includes the strategic variables estimated as SIMEX:

\[
P(\text{Vote on cert}) = \beta_0 + \beta_1 \text{Authorship} + \beta_2 \text{Winning} + \beta_3 \text{Affirm}
\]

In Model II, a host of control variables are included. The literature indicates that these variables influence the Court’s agenda setting decision. The variables are: Solicitor \( (= 1 \text{ if the Solicitor General appears before the Court; } = 0 \text{ otherwise}) \), \text{Reversal on Lower Court} \( (= 1 \text{ if lower court affirmed; } = 0 \text{ otherwise}) \), \text{Civil Liberties} \( (= 1 \text{ if the case is coded as a Civil Liberties issue by Spaeth; } = 0 \text{ otherwise}) \), \text{Constitutional Claim} \( (= 1 \text{ if the case includes a constitutional claim; } = 0 \text{ otherwise}) \), \text{Dissent on Lower Court} \( (= 1 \text{ if there was a dissent on the lower court; } = 0 \text{ otherwise}) \), and the Attitudinal variable, \text{Lower Court Direction} \( (= 1 \text{ if conservative; } = 0 \text{ if liberal}) \). I expect all coefficients to be positive, other than the coefficient on Affirm and on Reversal on Lower Court (due to the coding scheme used, see above for more details). In order to avoid truncation, the Conflict variable (indicates conflict between lower courts or circuits) was excluded from the specification of the model. The way it is coded (based on the majority opinion) means that Conflict will only be available for cases granted. Furthermore, as Caldeira and Wright (1988) underscore, if included this variable would also require the consideration of alleged versus real conflicts.

\[
P(\text{Vote on cert}) = \beta_0 + \beta_1 \text{Authorship} + \beta_2 \text{Winning} + \beta_3 \text{Affirm} + \beta_4 \text{Solicitor} + \beta_5 \text{Reversal} + \beta_6 \text{Constitutional Claim} + \beta_7 \text{Dissent} + \beta_8 \text{Attitudinal}
\]
Results

Are justices sufficiently rational to think beyond the final disposition? Do they consider opinion authorship when deciding whether to review a case? Table 1 lends strong support to the type of rational behavior proposed here. The goodness of fit measure indicates that Model I (Table 1) is significant as a whole. Furthermore, all the strategic variables are either significant or highly significant and in the hypothesized direction. In Model I, the effect of Authorship is positive and significant. Likewise, the Winning variable is positive and highly significant. As expected, planning to affirm reduces the likelihood of a vote to grant. Accordingly the coefficient on Affirm is negative and significant.

The findings for the strategic variables in Model I are buttressed by those in Model II. The specification for Model II includes both strategic and non-strategic variables. The findings are reassuring. As hypothesized, the coefficients on Authorship and Winning are positive and either significant or highly significant. Affirm has a negative and highly significant effect. As for the control non-strategic variables, they are either significant or highly significant. Appearance of the Solicitor General before the Court increases the likelihood of a vote to grant. Likewise, a case with a civil rights issue or where a constitutional claim is made is more likely to be audited. The attitudinal variable, Lower Court Direction, also has a highly significant effect in the hypothesized direction and the same applies for Reversal on the Lower Court. The sole exception is Dissent on Lower Court, which is significant but in the opposite direction to that hypothesized.

Table 1. Simulation Extrapolation (SIMEX) models.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypotheses</th>
<th>Model I: Strategic variables model</th>
<th>Model II: Fully specified model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorship (SIMEX)</td>
<td>+</td>
<td>0.03 *** (0.006)</td>
<td>0.02 * (0.008)</td>
</tr>
<tr>
<td>Winning (SIMEX)</td>
<td>+</td>
<td>0.02 *** (0.001)</td>
<td>0.02 *** (0.002)</td>
</tr>
<tr>
<td>Affirm (SIMEX)</td>
<td>-</td>
<td>-0.045 *** (0.0009)</td>
<td>-0.03 *** (0.002)</td>
</tr>
<tr>
<td>Solicitor</td>
<td>+</td>
<td></td>
<td>0.3 *** (0.05)</td>
</tr>
<tr>
<td>Reversal on Lower Court</td>
<td>-</td>
<td></td>
<td>-0.22 *** (0.03)</td>
</tr>
<tr>
<td>Civil Rights</td>
<td>+</td>
<td></td>
<td>0.42 *** (0.05)</td>
</tr>
<tr>
<td>Constitutional Claim</td>
<td>+</td>
<td></td>
<td>0.31 *** (0.04)</td>
</tr>
<tr>
<td>Dissent on Lower Court</td>
<td>+</td>
<td></td>
<td>-0.85 *** (0.04)</td>
</tr>
<tr>
<td>Lower Court Direction</td>
<td>+</td>
<td></td>
<td>0.46 *** (0.05)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>-0.56 *** (0.1)</td>
<td>0.05 (0.2)</td>
</tr>
<tr>
<td>N</td>
<td>28013</td>
<td>15687</td>
<td></td>
</tr>
<tr>
<td>Wald F</td>
<td></td>
<td>F(3, 28009) = 733.62</td>
<td>F(9, 15687) = 208.2</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
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Figure 1 lends further support for the selection of SIMEX as the preferred estimation protocol and helps in the interpretation of the effect of the error (Carroll et al., 2006). In this figure, the SIMEX results and the extrapolation for each of the estimates are presented. The extrapolated point estimates are for Authorship, Reversal and Winning in Model I. The values on the $y$-axis are for the estimates of the three independent variables and the constant as indicated. On the $x$-axis are values for $\lambda$, the attenuation coefficient, which indicates the degree of contamination. The SIMEX Estimate and Naïve Estimate labels correspond to the values of $-1$ and $0$ on the $x$-axis respectively. As well illustrated in Figure 1, with multiple predictors, the naïve estimate may be biased in either direction (Hardin et al., 2003b).

Ostensibly, the curves in the four panels in Figure 1 may seem similar. Yet, a closer examination reveals that compared to other covariates, the effect of contamination on the Authorship variable is far more definitive. This not only validates SIMEX as the most appropriate estimation procedure, but also helps in the elucidation of the strong effect of measurement error on estimation. For instance, for the Winning predictor a change in the $\lambda$ values from $-1$ to $0$ translates to a change of 0.003 in the size of the estimate. In other words, 0.003 is the difference between the SIMEX Estimate and the Naïve Estimate (approximately 14% of the value of the SIMEX estimate). Similarly, the effect of contamination on the difference between the two estimates is 0.008 for the Affirm covariate (again approximately 18% of the value of the SIMEX estimate). However, for Authorship the difference is 0.018, which is more than the size of the Naïve Estimate. The change in the size of the coefficient, once the effect of measurement error on the estimator is determined experimentally via simulation, is greater than 55%. In sum, the effect of contamination is substantial. Any other estimation protocol, unrelated to measurement error, would yield grossly biased results.

Comparison of the size of the coefficients on the strategic variables with those on the control variables indicates that although all are statistically significant, there is a substantive difference (Table 1). On average, the absolute value of the coefficients on the strategic variables is less than 10% of the absolute value of the coefficients on the non-strategic variables. For the selection of a particular case, therefore, legal variables are usually more dominant in the justices’ mind (Perry, 1991). Yet, since judicial tenures are decades-long, over time even the relatively small influence of strategically thinking about the opinion at the time of cert, incrementally steers the course in which constitutional law evolves. Rational thinking of the type studied here, therefore, may have major social ramifications.
Strategic behavior during cert, the results indicate, is not limited to thinking about the final disposition. Justices’ strategic calculations go beyond the dispositional majority, and pertain to their potential effect on the doctrinal outcome. When she is the opinion author, the justice is better positioned to influence the final outcome. Authorship allows her to closely monitor the development of doctrine and jurisprudence in the opinion (Bonneau et al., 2007). Justices systematically make this type of calculation at the time of cert.

**Figure 1.** SIMEX Plots (Model I).

Discussion and conclusions

In *Doe v. McMillan*, predicting the dispositional majority and knowing his own expertise, apparently allowed Justice White to consider authorship at the time of cert. Expecting to be the author if the case is granted review motivated White to work hard to secure the case’s place on the Court’s plenary docket. The research question in this paper concerns the extent of rationality in the decision making process of justices on the Supreme Court of the United States. Clearly, rational behavior that goes beyond the final disposition would allow justices to maximize their utility by predicting whether they will be authors of the opinions, and cast their cert vote accordingly. Based on the SIMEX protocol to deal with estimation errors
and using the Burger Expanded Database to overcome truncation issues, the results indicate that strategically considering opinion authorship at cert is systematic. This is crucially important for analysis of individual-level decision making in the Court, as well as for our understanding of the role of the Supreme Court within the American constitutional structure writ large. In this sense, rationality and society are clearly interlinked.

The analyses undertaken in this paper for the Burger Court era indicate that justices consider both the dispositional and the doctrinal majorities at the time of cert. Changes in the constitutional structure typically take place in a piecemeal fashion. Hence, case by case, incremental changes produced by strategically thinking about the opinion at the time of cert, would take the law of the land in justices’ favorite directions in the course of their long tenure on the bench.

These findings call for more research on the types of strategic behavior during agenda setting. For instance, to maximize their policy making power, apart from opinion authorship, justices may also think about future reactions of counterpart branches if the case is audited. For instance, in *Hutchinson v. Proxmire*, comments made by one of Blackmun’s clerks in his markup palpably indicate this type of strategic thinking. The clerk writes: ‘the judgment below seems wrong to me. I do think, however, that the Court might want to be cautious about venturing into an area where members of the Senate are engaging in activities that are at least peripherally related to their official functions.’ What is more, considering the doctrinal majority may come in additional forms other than considering authorship at the time of cert. When selecting cases for review, justices may simply consider their potential ability to influence the opinion as a part of the collegial game and vote accordingly (Hammond *et al.*, 2005; Sommer 2010).

On the macro, institutional level, by picking cases with this type of consideration in mind, the Court’s influence in American politics should be ascribed, to a considerable extent, to the Court’s own initiative. The rational and strategic conduct of justices translates into a key position for their institution within American society. Their rational behavior during case selection is an indirect yet influential means to circumvent what is considered to be a constitutionally built-in dependency on other departments of government. The strategic behavior on the micro, individual level demonstrated here has macro-level implications. As Cordray and Cordray (2004) put it: ‘The Justices’ case selection decisions also help to define the role that the Court plays within the judicial system and American life … decision making at the threshold stage may be “second to none in importance”. At a minimum, it makes a crucial contribution to the lasting body of national law that the Supreme Court eventually compiles’ (page 397).
In closing, a series of reforms in the Supreme Court’s agenda setting capacity, culminating in the Judiciary Act of 1925, altered the Court’s position in the American government triumvirate and in the political sphere writ large. The litigation market in which entrepreneurs bring to the Court the major issues of the day (Baird, 2004, 2007) combined with the shrinking number of cases per term (Walker et al., 1988), prompted the justices to populate their discretionary docket rationally. It is their preferences concerning the national agenda and its future trajectory that prescribe how they vote on cert. Being opinion-minded at the time of cert made this an accomplishable goal. In the aggregate, this rational behavior made the Court a puissant organ of government with sizeable influence on political, economic and social aspects of American life. An institution that, as Frankfurter and Landis (1928) state, exercises powers un matched in any other system.

Appendix 1

Since I use replicate measurements, Empirical SIMEX (Carroll et al., 2006) is employed. $k_i \geq 2$ replicate measurements are necessary in order to identify the error variances $\sigma_{u,i}^2$. These would be conditional probability values for each of the justices in two disparate points in time (i.e. in two natural courts). The mean of the replicate measurements is used as the measurement of the independent variables (Authorship, Winning and Affirm). In order to generate remeasured data with variance inflated by the factor of $1 + \lambda$, Stata takes suboptimal linear combinations of the replicate measurements using random linear contrasts. If $c_{b,i} = (c_{b,i,1}, \ldots, c_{b,i,k_i})'$ is a normalized contrast vector, $\sum_j c_{b,i,j} = 0$ and $\sum_j c_{b,i,j}^2 = 1$, for $i = 1, \ldots, n$, $b = 1, \ldots, B$ define $W_{b,i}(\lambda) = \bar{W}_{i, \cdot} + (\lambda / k_i)^{1/2} \sum_{j=1}^{k_i} c_{b,i,j} W_{i,j}$.

As Carroll et al. (2006) demonstrate, the results for the expected value and the variance are respectively

$$E\{W_{b,i}(\lambda) \mid X_i\} = X_i \quad \text{and} \quad \var\{W_{b,i}(\lambda) \mid X_i\} = (1 + \lambda) \sigma_{u,i}^2 / k_i = (1 + \lambda) \var(W_{i, \cdot} \mid X_i)$$

The variance in this case has an important property for SIMEX – it is inflated by a multiplicative factor that vanishes when $\lambda = -1$. What is more, $\text{MSE}\{W_{b,i}(\lambda)\} \to 0$ as $\lambda \to -1$. By making the contrasts random, and sampling $c_{b,i}$ uniformly from the set of all normalized contrasts vectors of dimension $k_i$, replicate versions of $W_{b,i}(\lambda)$ are generated. Once this step
is completed, the average naïve estimates, $\hat{\theta}(\lambda)$, and $\hat{\theta}_{\text{SIMEX}}$ (when $\lambda = -1$) are calculated.

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**Notes**
1. For a similar treatment of American courts as rather active agents of policy making see Melnick (1994).
2. Strategic behavior may result in sincere decisions, i.e. the justice votes her preference. Alternatively, when acting strategically justices may opt to hide their sincere preference at a specific stage of the decision-making process, hoping to reap benefits somewhere in the future (Caldeira et al., 1999). This is defined as sophisticated behavior.
3. According to Error Correcting strategy, reversal-oriented justices will be more likely to vote to grant, whereas those justices who want to affirm the decision of the lower court will tend to deny.
4. Prediction strategy assumes a direct positive relationship between a justice voting to grant, and her being a member of the majority on the merits. This is similar to aggressive grants and defensive denials.
5. Majority strategy assumes that liberals are more likely to cast a Grant vote if the majority on the Court is liberal, while conservatives are more likely to vote to review the case when the Court’s majority is conservative.
6. Tanenhaus (1963) argues that certain cues help justices decide on cert. The cues include party variables (e.g. the Federal Government), case issue (mainly civil liberties and economic cases), and dissent on the lower court. Armstrong and Johnson (1982) examine Tanenhaus’s Cue Theory in combination with Error Correction theory. They find effects for both, as well as an effect for the interaction of the two.
7. As many models of the collegial game (e.g. Hammond et al., 2005, Maltzman et al., 2000) illustrate, the coordination problem might revert to a cooperation problem if a dispositional majority of five loses the fifth justice (Brenner, 1980, 1982; Hagle and Spaeth, 1991; Howard, 1968). Short of changes during the process of accommodation, however, the solution to the cooperation problem facing the dispositional majority (i.e. the (minimum of 5-justice) dispositional majority) essentially determines the final decision on the merits.
9. $E_i$ is independent of all $Y_i$, $Z_i$, and $U_i$. Additionally, it is independent and identically distributed (IID), unbiased and homoscedastic.
For our purposes, the Simulation Extrapolation (SIMEX) method offered by Cook and Stefanski (1994) is superior to Regression Calibration (Carroll et al., 2006) in several respects. This is a general model. Since the dependent variable is dichotomous the canonical link function is the nonlinear logistic regression. According to Carroll et al. (1996, 2006), SIMEX might prove superior to Regression Calibration in such models. In addition, it is very simple to implement. The method also lends itself to graphic descriptions. Of interest are the figures of the error-prone covariates as they indicate the degree of sensitivity of the results to the size of the measurement error. These figures also well illustrate the effect of measurement error and the need to correct the bias. On the downside, as Cook and Stefanski (1994) assert, assessment of the variability of the estimates is more difficult and requires adequate computing power.

To make the assumption that the error is nondifferential, let Y be the response, X are predictors measured with error, Z are predictors without error, and W and T respectively are major and second proxies to X. An error is said to be nondifferential if (W, T) are conditionally independent of Y given (X, Z). (W, T) provide no additional information about Y if we are able to observe X. I can safely make this assumption here. There is nothing in the predicted probability of authorship (W) which adds to the justices’ knowledge over what they would get from knowing with certainty whether they will write the opinion (X).

This is also why SIMEX differs from Regression Calibration. Whereas the latter uses fitted values of the covariates to run the analyses, SIMEX simulates data which allows modeling of the effect of measurement error on the coefficients (Hardin et al., 2003a, 2003b).

Evidently, the justices’ fields of expertise might be more specified. Yet, the number of cases in many of the categories in the more detailed Legal Issue variable in the Spaeth database is too small for statistical analyses.

Stata, the statistical software package used for analysis, requires a minimum of two replicates of the variable (see Appendix 1). These would be two error-prone measurements of the conditional probability variables taken at different points in time. The two replicates used here are from the longer natural courts under Burger, the 4th and the 7th, which minimizes any loss of information. Seven justices served on both natural courts (White, Blackmun, Powell, Rehnquist, Marshall, Brennan and Burger). Based on data concerning those justices, conditional probability replicates for Authorship, Winning and Affirm were generated for the 4th and the 7th natural courts. To avoid truncation, this was also applied to cases denied review, which were weighted in the analysis.

In the literature, it is an amicus brief by the Solicitor General that increases the likelihood of an audit. Data about amici briefs are not available for all the terms, and thus a brief by the Solicitor General is substituted by his appearance before the court (Waxman, 2001). See Caldeira and Wright (1988) for a similar approach.

See Chapter 5, Section 5.3.1.3 in Carroll et al. (2006) for more details.
References


