JUDICIAL CLERK SCHOOLS AND LIKELIHOOD OF REVERSAL

by

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ABSTRACT

This paper assesses whether clerks to federal district court judges "matter" in the sense of potentially influencing judicial opinions, using a sample of 36,107 opinions from 220 judges. It is hypothesized a de-emphasis of doctrine at Yale Law School will produce clerks associated with increased likelihood of reversal where clerks are not required to take the bar.

The likelihood an opinion will have a Shepard's warning signal (roughly equivalent to a reversal) is estimated using conditional (fixed effects) logistic regressions with independent variables including, inter alia, 18 variables reflecting the percentage of a judge's clerks from 18 top law schools and 18 variables interacting those variables with a dummy variable that equals one where the judge expects clerks to take the bar. Only for Yale Law School is the former positive and significant at the 5% level; only for Yale Law School is the latter negative and significant at the 5% level. P-values for rejecting equality of Yale Law School with Harvard Law School and Stanford Law School are 0.01 (for the non-interacted variable) and 0.10 (for the interacted variable) or lower, respectively. The results for Yale Law School, in non-interacted form, are robust to re-specifying the model to estimate each judge's annual fraction of reversals using weighted least squares, collapsing the data set to 1,202 observations (although some other school variables become significant). In sum, the results for Yale Law School are qualitatively different from those of other schools, consistent with the hypothesis that clerks matter.

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INTRODUCTION

Some anecdotal evidence suggests the quality of clerks influences judicial decision-making. Judge Wald, speaking primarily as to appellate judges, has written, "The judge-clerk relationship is the most intense and mutually dependent one I know of outside of marriage, parenthood, or a love affair.... But an excellent versus a mediocre team of clerks makes a huge difference in the judge's daily life and in her work product."[1] This paper, focusing on federal district courts,[2] provides more formal evidence. The results support the conclusion that clerks do, in fact, matter. However, the results may be somewhat unexpected.

To this end, this paper examines certain characteristics of judges' clerks. A finding that clerks' characteristics are associated with differences in judicial opinions supports the hypothesis that the clerks themselves matter. Two basic attributes are examined: whether the judge expects his or her clerks to take the bar and the law schools the clerks attended.

The underlying theory is relatively straightforward. It is hypothesized clerk knowledge of doctrine will matter. Allocation of instructional time in a law school

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[1] Patricia M. Wald, *Selecting Law Clerks*, 89 MICH. L. REV. 152, 153 (1990).

[2] The surveys by Christopher Avery et al., *The New Market for Federal Judicial Law Clerks*, 74 U. CHI. L. REV. 447 (2007), and Christopher Avery et al., *The Market for Federal Judicial Clerks*, 68 U. CHI. L. REV. 793 (2001) focus on appellate clerkships. For reasons discussed *infra* text accompanying note 11, this paper examines federal district court judges.

classroom is a zero-sum activity. Increased emphasis of theory necessarily decreases the amount of time spent on doctrine. Yale Law School holds itself out as extreme in emphasizing theory. A letter from Harry Wellington, who was Dean of Yale Law School from 1975 to 1985,[3] references the school's emphasis of theory:

> What we teach is dictated primarily by the scholarly interests of the faculty. This approach to the curriculum is why Yale is what it is: the most theoretical and academically oriented law school in America.[4]

The LAW SCHOOL BUZZ BOOK[5] provides an anecdotal observation from a 2003 graduate consistent with Wellington's view:

> Those who wish to keep their heads down and go unnoticed will also graduate with a law degree from the best school in the country, and may be able to do so without learning any law whatsoever.[6]

The motivation for the structure this investigation takes, then, is it is unreasonable to expect students, no matter how bright, to know a lot about something they have not studied.

Moreover, there appears to be some consistent evidence provided by a survey of "nearly 400 hiring partners, hiring committee members, associate interviewers and recruiting professionals across the country on which law schools best prepare their graduates to achieve in the firm environment,"[7] the Vault Top 25 Law School Rankings. Notwithstanding Yale's presence at the top of the *U.S. News & World Report* rankings of law schools,[8] and the stellar credentials of Yale Law School students when they start legal education,[9] that survey finds graduates of Yale Law School only tenth-best-prepared.

Of course, the process of studying for the bar may well eliminate much of any discrepancy in exposure to doctrine, particularly for students who are very quick studies. The basic relationship investigated, then, is whether the fraction of a federal district court judge's clerks who are graduates of Yale Law School and were not, as conditions of employment, expected by their judges to have taken the bar, is associated with an increased likelihood of reversal.

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[3] http://www.law.yale.edu/cbl/modernera.htm (identifying as Dean from 1975 to 1985).

[4] Letter from Harry Wellington to A. Bartlett Giamatti (Apr. 17, 1984) (quoted in LAURA KALMAN, YALE LAW SCHOOL AND THE SIXTIES: REVOLT AND REVERBERATIONS 309 (2005)).

[5] VAULT INC., LAW SCHOOL BUZZ BOOK 2007 (Carolyn C. Wise & Staff of Vault, eds.).

[6] *Id.* at 123. The author was prompted to investigate the topic of this paper by a colleague who, in discussing a case involving business law that the the colleague thought was patently erroneous from a doctrinal perspective, speculated concerning the law school from which the judge's clerk may have graduated.

[7] http://www.vault.com/lawschool/rankingtop25/.

[8] *E.g.*, *Schools of Law*, U.S. NEWS & WORLD REP., 2000 WLNR 6405474 (Westlaw, Apr. 10, 2000) (ranking Yale Law School first).

[9] *E.g., id.* (identifying Yale Law School as having both the highest 25 percentile and 75 percentile (tied with NYU Law School and Harvard Law School) LSAT score.

This paper is one of a number of recent works examining judicial clerks. One recent unpublished paper[10] investigates whether judicial clerks influence the performance of U.S. Supreme Court justices. Another unpublished paper provides a description of the linkages among judges through their clerks.[11] Because there is a relatively small number of U.S. Supreme Court cases decided each year, this investigation was structured to address reversals of federal district court judges.

Using a sample of 36,107 opinions authored by 220 federal district court judges, this investigation finds one persistent pertinent relationship—a positive relationship between a Shepard's *warning* signal (roughly equivalent to a reversal) and the fraction of the judge's clerks from Yale Law School, where the clerks are not required to take the bar.[12] That relationship is found estimating the likelihood of reversal using either a conditional (fixed effects) logistic regression or a random-intercept logistic regression; and it is found collapsing the data to investigate variations in judges' reversal rates over different year periods using a weighted least squares fixed effects model. The results are consistent with the premise that clerks "matter."

II. DATA

1. Opinion Selection; Matching of Judges and Clerks' Schools; Requiring the Bar

The schools attended by a judge's clerks were taken from the spring edition of the *Judicial Yellow Book*, for 1997 through 2003, inclusive.[13] The judges, including those on senior status, who identified the school attended by at least one clerk in the spring 1997, spring 1999, spring 2001 or spring 2003 *Judicial Yellow Books* were collected. For this purpose, an employee was identified as a "clerk" if he or she has one of the following titles: clerk, senior clerk, senior law clerk, junior clerk, junior law clerk, career law clerk, permanent law clerk, deputy clerk or briefing attorney.[14] Persons identified as having one of the following titles were not treated as clerks: case manager, courtroom clerk, docket clerk or secretary. Research

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[10] Todd C. Peppers & Christopher Zorn, Law Clerk Influence on Supreme Court Decision Making (June 14, 2007), *available at* http://ssrn.com/abstract=925705.

[11] Daniel M. Katz & Derek K. Stafford, Hustle and Flow: A Social Network Analysis of the American Federal Judiciary (Feb. 25, 2008), *available at* http://ssrn.com/abstract=1103573.

[12] The estimations reported in this paper include independent variables, for example, representing the fraction of a judge's clerks from Yale Law School and that fraction interacted with a dummy variable indicating that the judge expects clerks to take the bar. The coefficient on the former is the same as would be found in comparable regressions substituting for the former independent variable that variable interacted with a dummy variable indicating the judge does **not** require the bar. Thus, the reported coefficient for the non-interacted school variables show the impact where the clerks are not required to take the bar. *See infra* notes 32-33 and accompanying text.

[13] LEADERSHIP DIRECTORIES, INC., JUDICIAL YELLOW BOOK (Spring 1997 through Spring 2003).

[14] The title "briefing attorney" is very uncommon in the *Judicial Yellow Books*. It was treated as a clerk because a review of the graduation years for persons shown with that title indicated these employees were recent graduates and not distinguishable from typical clerks.

assistants collected the schools reported as having been attended by each of those clerks in the spring 1997 through spring 2003 *Judicial Yellow Books* (seven separate editions).[15]

The 220 judges used in the sample revealed the school information for a total of 2,767 clerk-periods in these seven *Judicial Yellow Books*. The most frequent are Harvard (170), New York University (120), University of Michigan (114), Yale (110) and Columbia (107). Table 1 reports the frequencies for the fifty most frequent law schools.

To determine whether the judge requires his or her clerks to take the bar, the Federal and State Judicial Clerkship Directory for years 1995 (in which judges identify vacancies for 1995-1996 and 1996-1997), through 2001 (in which judges identify vacancies for 2001-2002 and 2002-2003)[16] were reviewed. Those directories include surveys designed to solicit judicial clerkship applications. The forms ask judges to specify whether their clerks are expected to take a bar (a negative response indicating having taken the bar is optional, not, of course, prohibited, although occasionally a judge would indicate that taking the bar during the clerkship term itself was prohibited). It bears mention that many judges did not complete the form, i.e., did not use this mechanism to solicit clerkship applications, in any particular year.

The data set includes opinions authored by a total of 220 federal district court judges. Each of these judges included clerk school information in at least one of those seven *Judicial Yellow Books*. Each also either (i) in at least two editions of the seven issues of the Federal and State Judicial Clerkship Directory referenced above indicated that he or she expected his or her clerks to take the bar and never indicated that he or she did not expect his or her clerks to take the bar or (ii) in at least two of those editions of the Federal and State Judicial Clerkship Directory indicated that he or she did not expect his or clerks to take the bar and never indicated that he or she expected his or her clerks to take the bar. The former judges were categorized as requiring the bar; the latter were categorized as not requiring the bar.

Additionally, judges who did not issue at least one opinion in this time period having a Shepard's *warning* signal (roughly equivalent to being reversed; described

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[15] The author collected the information for one *Judicial Yellow Book*. For each other *Judicial Yellow Book*, one Research Assistant collected the data and a second Research Assistant proofread the first's inputting of the data for that *Judicial Yellow Book*.

Five other judges identified one or more clerks in the 1998 *Judicial Yellow Book* but did not identify a school for a clerk in any of the other seven *Judicial Yellow Books*. Four other judges identified one or more clerks in the 2002 *Judicial Yellow Book* but did not identify a school for a clerk in any of the other seven *Judicial Yellow Books* reviewed. These nine judges, each of whom provided clerk information for only a single year, are not included in the data set.

[16] National Association for Law Placement, 1995-2001 Federal and State Judicial Clerkship Directory (1995-2001). A copy of the 2002 Federal and State Judicial Clerkship Directory could not be located.

in more detail below), the dependent variable in the primary estimations, are excluded from the data set. That is because such a judge does not influence the results of a fixed effects regression. This filter excludes 23 judges and a total of 221 opinions (less than 10 opinions per judge, on average). Because the *warning* rate is 6.9% in the sample, it is not surprising to find excluding judges who do not have a *warning* signal yields a set of judges averaging less than 10 opinions per judge.

Initially, each of those judge's opinions for the period from August 1, 1996, through September 1, 2003, was identified through Lexis.[17] For reasons referenced below, the sample was then reduced to opinions dated from March 1, 1997, through August 31, 2003. The data set includes 36,107 opinions written by these 220 Federal District Court judges.

The opinions were partitioned into one of seven time periods: each of the six years ended September 1, 1998, through September 1, 2003, and the six months ended September 1, 1997 (the reason for omission of opinions from September 1996 through February 1997 will be explained shortly).

Judgment was exercised in deciding how to correlate clerks with opinions. The data sources referenced do not reveal the precise dates clerks started work, although an August or September start date was typical for those expressing a date. Moreover, the sources referenced do not identify what clerks worked on particular opinions.

There will be a lag time between a clerk starting work and any influence the clerk may have on opinions the judge issues. Similarly, there will be a delay between the end of a clerk's employment and the last issuance of an opinion that the clerk had the opportunity to influence. It was ultimately decided to use a six-month trailing "window" in assigning clerks to opinions. Clerks identified in a spring *Judicial Yellow Book* are assumed to have started work on the preceding September 1. Additionally, for each opinion, the clerk statistics are based on the

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[17] A search was done within the Lexis state-specific Federal District Courts database for the state identified by the *Judicial Yellow Book* for the judge. The search for each judge took the following form; opinionby(*last_name*) & judge(*last_name*) & date(>= 8/1/1996) & date(<= 9/1/2003) and not judge(magistrate). A summary version of each opinion was downloaded using the Lexis *Get & Print* feature. Word processor macros were written to extract the judge identified as the opinion's author. These were reviewed to eliminate opinions of other judges in the same state who had the same last name. These were also reviewed to eliminate opinions from the occasional multi-judge panels. *See generally* 28 U.S.C. § 2284(a) (2000).

Opinions written by a district court judge when sitting by designation on a U.S. Court of Appeals are not included.

The date of the opinion was similarly extracted from the downloaded summary version of the opinion. It bears mention that, for reasons that are not clear, the "date" of the opinion assigned in the Lexis "date" search was not always the same as the date actually listed in the extracted version of the opinion, some varying by a number of years. The dates assigned to the opinions are those set forth in the summary versions of the opinions that were downloaded.

average statistics for the judge over the six months immediately preceding the opinion's issuance.

For example, opinions issued from March 1, 2003, through August 31, 2003, are matched to the judge's clerk information reported by the judge in the spring 2003 *Judicial Yellow Book* (clerks who are treated as having started September 1, 2002). Clerk information matched to opinions issued from September 2002 through February 2003 will be based on the averages of the clerk information for the spring 2002 *Judicial Yellow Book* and the spring 2003 *Judicial Yellow Book*. The closer to March 2003 the opinion was issued, the greater weight placed on the clerkship information in the spring 2003 *Judicial Yellow Book*. The closer to August 2002 the opinion was issued, the greater the weight placed on the clerkship information in the spring 2002 *Judicial Yellow Book*.

This process would partially attribute clerkship information reported in the spring 1996 *Judicial Yellow Book* to opinions dated September 1996 through February 1997. Because the 1996 *Judicial Yellow Book* could not be located, the data set excludes opinions dated before March 1, 1997.

That this matching is imperfect is not a cause for concern. The kind of statistical model reflected in this paper inherently contemplates there is "noise" in the data.[18] This matching, which is of course inferior to the perfect, but impracticable, matching of individual opinions to individual clerks, will contribute to that noise. As long as the noise is not correlated with relevant factors, it will merely serve to obscure any true relationship.

These 220 judges, on average, have opinions in 5.94 of these seven temporal periods. To state it another way, the opinions are divided into 1306 (*220 x 5.94*) judge/year groups. The judges average 164 opinions in the sample (*36,107 / 220*), with a maximum and minimum of 872 (2.4% of the sample) and 4, respectively. Within the 1306 judge/year periods, the maximum number of opinions for a judge/year is 229, the minimum is 1, and the average is 27.6 (*36,107 / 1306*).

2. Shepard's Warning Signal

Lexis assigns one of three adverse "Shepard's Signals" to some of the opinions:

- *Warning*, for which Lexis provides a summary meaning of "negative treatment indicated;"
- *Questioned*, for which Lexis provides a summary meaning of "Validity questioned by citing ref[erences];" and
- *Caution*, for which Lexis provides a summary meaning of "Possible negative treatment indicated."

[18] JOOP HOX, MULTILEVEL ANALYSIS: TECHNIQUES AND APPLICATIONS, at ix (2002) (attributing to Leslie Kish the following: "To err is human, to forgive divine; but to include errors into your design is statistical.").

Of these three signals, this paper reports results concerning the likelihood of the most adverse signal, *warning*. More specifically, the *warning* signal means that the case has been reversed, vacated, set aside or invalidated, in whole or in part, on direct appeal or that, according to subsequent case law, the case being Shepardized has been "abrogated" or "invalidated" by an intervening opinion.[19]

Prior academic research has favorably assessed the use of Shepard's signals in academic research. Spriggs and Hansford,[20] reviewing Shepard's signals assigned to U.S. Supreme Court cases, find "Shepard's provides a reliable indicator of how citing cases legally treated cited cases. We are particularly sanguine about the reliability of the stronger negative treatment codes …."[21] It bears mention that, for a number of reasons, properly assigning Shepard's signals to federal district court cases may be more complex than assigning signals to U.S. Supreme Court opinions. There are two additional levels of potential direct subsequent appellate review (or more if one considers the possibility of en banc review or grant of rehearing at the Court of Appeals as separate "levels" for this purpose) of federal district court opinions, which are not applicable to pronouncements of the U.S. Supreme Court. That additional complexity may make these signals more difficult to assign properly.

For these reasons, one may find the results of Spriggs and Hansford's work not directly comparable to the use of Shepard's signals in this paper. Nevertheless, notwithstanding the imperfection of this variable, use of a variable produced by a commercial enterprise that has been engaged in assigning these signals on a for-profit basis for decades would seem preferable to any ad hoc classification of opinions made by a scholar, whether with or without reliance on research assistants. Moreover, as there is no a priori reason to expect any imperfection in the assignment of signals is related to the schools attended by judge's clerks, it is expected that any variation from perfect classification simply serves to obscure any true relationship.

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[19] The "Product Guide—Shepard's Table of Authorities," www.lexis.com, identifies dozens of circumstances that can result in the assignment of a *warning* signal, including, inter alia, the following: abrogated ("The citing opinion states that the decision that you are Shepardizing has been reversed, vacated, abrogated or invalidated by an earlier decision."); annulled; different results reached on reconsideration; disapproved ("An opinion of a higher court has expressed a lack of harmony with the decision in the case you are Shepardizing, thereby casting some doubt on the continuing validity or precedential value of the lower court case you are Shepardizing."); nullified; overruled; replaced; reversed; set aside; superseded; vacated; and withdrawn ("The court opinion which has been withdrawn in the case you are Shepardizing has been supplanted with a new opinion.").

[20] Lexis reports Shepard's signals less finely partitioned than the paper version of Shepard's referenced by Spriggs and Hansford. To put it another way, Lexis, in reporting these signals, combines signals that are separate in the paper version of Shepard's.

[21] James F. Spriggs, II, & Thomas G. Hansford. *Measuring Legal Change: The Reliability and Validity of Shepard's Citations*, 53 POL. RES. Q. 327, 338 (2000).

The *warning* signal is assigned in 6.9% of the opinions (2478 of the 36,107 opinions). Among the 220 judges in the sample, the judge reversed most frequently has a *warning* signal assigned to 75.0% of his or her opinions in the sample. The judge reversed least frequently has a *warning* signal in 0.9% of his or her opinions in the sample.

3. School Variables

The school variables are expressed in the data set as decimals. For a judge who hired clerks only from Yale Law School, the variable *yale* would equal 1. For a judge who hired two clerks each year, one from Harvard Law School and one from Yale Law School, the variables *harvard* and *yale* would equal 0.5.

Summary statistics for these school variables are presented in Table 2. To prepare the summary statistics in that table, the 36,107 opinions were grouped among the 220 judges. Within each group, i.e., for each judge, the average of each of these statistics was computed, producing for each variable a set of 220 observations. For example, a judge issuing one opinion in a year where he had one clerk, from Yale, and two opinions in a second year, where he had one clerk, from Harvard, the statistic *yale* for this judge would be 0.33. Table 2 reports the average, median, minimum, maximum and standard deviation of those 220 observations. For example, for one judge (having the highest statistic for this variable), the average fraction of clerks from Yale Law School is 0.455. Summary statistics for the school variables within the full sample of 36,107 opinions, and within the subsamples of opinions issued by judges who do and do not require the bar, are reported in Table 3.

Summary statistics showing the mean values of the eighteen school variables between subsamples of opinions that have *warning* signals and those that do not are shown in Table 4. That table also shows the mean values of those school variables within subsamples of opinions with *warning* signals of judges who do and do not expect their clerks to take the bar.

The summary statistics in Table 4 provide the initial evidence suggesting clerks matter. The mean value of *yale* is 0.072 (7.2%) in opinions having a *warning* signal but only 0.055 (5.5%) in opinions not having a *warning* signal, i.e., a difference of 1.7 percentage points. For each of the other seventeen law schools the magnitude of the difference is less than one percentage point. Moreover, the schools with the largest means among opinions with *warning* signals where the bar is not required are Harvard (10.3%) and Yale (10.2%). But the corresponding percentages for those schools for opinions with a *warning* signal where the bar is required are 4.6% and 2.7%, respectively.

4. Judicial Biographical Information; Appellate Bench Philosophical Orientation

Certain biographical information for judges, year of birth and party of appointing President, were collected from the Federal Judicial Center's Biographical Directory of Federal Judges.[22]

For purposes of collecting data relevant to controlling for the composition of the various appellate courts, reference was made to "judicial common space" (jcs) scores for federal appellate judges developed in an article authored by Epstein, Martin, Segal and Westerland.[23] On this scale, higher numbers identify more conservative jurists. The median judicial common space score for each term of each federal circuit was taken from the web site of that article's lead author.[24] These scores for each term were matched with opinions in the sample for the period ended in August of that year.

5. Lexis Topics

The likelihood an opinion will be reversed may be influenced by its subject matter. Lexis provides a categorization called "topics," which are similar to West Key Numbers but less finely partitioned. There are 42 principal topics that Lexis assigns. The portions of each opinion including the assigned topics were downloaded as word processor files using the Lexis *Get & Print* feature. The files were electronically parsed using author-written macros and the topics assigned to each opinion were extracted.

Lexis assigns a topic to a portions of the text of an opinion. Any one topic may therefore be assigned to the opinion more than once. The statistics for these topics within the 36,107 opinion in the sample are set forth in Table 5.

It bears mention that the Lexis database alters the assignment of topics to a particular opinion as time passes. This was discovered as the author, a few months after initially downloading the pertinent portions of the opinions and parsing them to extract the topics, downloaded a sample of thirty-six opinions a second time to confirm the electronic parsing of the opinions. Approximately 1% of the topic variables changed values. No discrepancy was produced by erroneous parsing of the originally downloaded opinion. Rather, in each case, Lexis had changed the topic assignments.

III. FORMULATION OF THE MODELS

This paper reports results estimating two different dependent variables. One set of models estimates the likelihood an opinion will have a *warning* signal. The sample size for each of these models is 36,107 opinions. A second set of models estimates the frequency with which a judge's opinions in a 12-month period will be

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[22] http://www.fjc.gov/history/home.nsf/judges_frm.

[23] Lee Epstein et al., *The Judicial Common Space*, 23 J.L. ECON. & ORG. 303 (2007).

[24] http://epstein.law.northwestern.edu/research/JCS.html.

reversed. For reasons identified below, these models have between 1,202 and 500 observations, depending on the model used. Statistical issues are presented in the formulation of both sets of models.

1. Estimation of the Likelihood of Reversal

a. Conditional (Fixed Effects) Logistic Regression

Type of Estimation. The judicial clerks are not, of course, randomly assigned to judges. The hiring process may result in assignment of clerks with particular characteristics to judges who are more or less likely to be reversed. For example, judges who disproportionately hire clerks from Yale Law School may be more (or less) likely to be reversed.

This paper uses logistic regression to estimate the likelihood an opinion will be reversed. One might be tempted to address the problem of non-random assignment of clerks to judges by adding a dummy variable for each judge. However, doing so is potentially problematic. The validity of the model depends on large sample characteristics,[25] and the sample, from the perspective of observations per judge, may not appear sufficiently large. Rabe-Hesketh and Skrondal, after referencing this issue in general, state "[W]e can ... construct[] a likelihood that is conditional on the number of responses that take the value 1 (a sufficient statistic for the ... intercept).... In logistic regression, conditional maximum likelihood estimation is more involved and is known as *conditional logistic regression*."[26]

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[25] One author provides the following description of the concern:

> This is an example of a general problem called the *incidental parameters problem* (Kalbfleisch and Sprott 1970) that arises in certain applications of maximum likelihood estimation. The justification for maximum likelihood estimators is usually asymptotic, which means that it's based on how the estimators behave as the sample gets large. However, the validity of that justification depends on the presumption that the number of parameters remains constant as the sample gets larger. For longitudinal data, that works just find if the number of individuals remains constant while the number of observations per individual gets larger. But if the number of individuals is getting larger while the number of time points remains constant, then the number of parameters in a fixed effects model (including the coefficients of the dummy variables) is increasing at the same rate as the sample size. This is not a problem for linear models ... but it is a serious problem with logistic regression and many other nonlinear regression models. The biases are greatest when ... the number of time points per individual is small.
>
> The solution to the incidental parameters problem is to do *conditional maximum likelihood* (Chamberlain 1980) ....

PAUL DAVID ALLISON, FIXED EFFECTS REGRESSION METHODS FOR LONGITUDINAL DATA USING SAS 57-58 (2005).

[26] SOPHIA RABE-HESKETH & ANDERS SKRONDAL, MULTILEVEL AND LONGITUDINAL MODELING USING STATA at 131 (2005).

At the expense of being repetitive, because some commentary on prior drafts may have clouded an understanding of the use of this technique,[27] another discussion of this proper estimation technique may be provided, this one from the manual for the statistical software:

> *clogit* fits maximum likelihood models with a dichotomous dependent variable coded as 0/1.... Conditional logistic analysis differs from regular logistic regression in that the data are grouped and the likelihood is calculated relative to each group; i.e., a conditional likelihood is used....
>
> … Biostatisticians and epidemiologists sometimes refer to the matched groups as "strata", but we will stick to the more generic term "group".
>
> Economists and other social scientists fitting fixed-effects logit models have data that look exactly like the data biostatisticians and epidemiologists call $k_{1i} : k_{2i}$ matched case-control data…. This data arrangement is what economists and other social scientists call "panel data", "longitudinal data", or "cross-sectional time-series data".[28]

There are a number of options the estimation software allows in estimating the conditional (fixed effects) logistic regressions. As the immediately preceding quotation suggests, there are various linguistic conventions used in various disciplines to describe assorted estimation issues and techniques. In order to specify, uniquely and unambiguously, the way the results in this paper were estimated, it may be helpful to provide the Stata (statistical software) syntax for the conditional (fixed effects) logistic regression reported in the paper, which is:

> *clogit* [*dependent variable*] [*independent variables*], group (*judge id*) vce (cluster *judge id*)[29]

One uses "the vce(cluster clustvar) option to obtain a robust variance estimate that adjusts for within-cluster[, referencing, in this case, judge,] correlation."[30]

It is important to note that in this estimation technique, any variable that does not change within each group (here, the judge identity) does not influence the estimation and is dropped from the estimation. The independent variables used in the models reflect this aspect of the modeling. For example, one might consider including the following independent variables: *require bar*, y*ale* (i.e., the clerk fraction from Yale Law School) and *require bar x yale*. The first, *require bar*, cannot be included in this estimation, because it stays the same for each judge throughout the sample.

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[27] John Donohue, Why I'd Stick With Yale Clerks—Some Econometric Ruminations http://balkin.blogspot.com/2008/04/why-id-stick-with-yale-clerks-some.html (Apr. 22, 2008) (redacted to correct inaccuracies Sept. 28, 2008).

[28] 1 STATACORP LP, STATA BASE REFERENCE MANUAL 275-76 (release 10).

[29] http://www.stata.com/support/faqs/stat/robust_ref.html.

[30] 1 STATACORP LP, *supra* note 28, at 284.

Dependent Variable. The dependent variable in these regressions is the presence of a *warning* signal.

School Variable & Requiring the Bar. For purposes of investigating the specific relationship for Yale clerks, the model includes an independent variable reflecting the average fraction (i.e., a percentage expressed as a decimal) of the judge's clerks from Yale Law School over the six months preceding the opinion's issuance. The corresponding fractions for the seventeen other law schools included in *U.S. News & World Report's* (April 2000) ranking of law schools[31] are also included. The investigation stops with the top 18 because, in general, lower-ranked schools appear less frequently and low frequency can yield variables that are collinear (as would be the case where judges who ever select a clerk from a particular school always select one clerk from that school).

Each of these school variables also appears a second time, interacted with a dummy variable that equals one if the judge expects clerks to take the bar. The interaction variable for a school shows the change between the estimated impact of clerks, not required to have taken the bar, and the impact of clerks from that school who were required to have taken the bar. For the reasons discussed above,[32] the variable *bar required* cannot be included other than in this interacted form.

There are a number of different ways one could attempt to isolate the impact of requiring the bar. Focusing, for example, on the variable *yale*, one could include, in addition to other variables:

Model I: (a) *not require bar x yale* and (b) *require bar x yale*
Model II: (c) *yale* and (d) *require bar x yale*

One could not include, in addition to either pair of variables, the third (e.g., *yale* in Model I), because two of the variables would be a linear combination of the third.

One may interpret the coefficient for (c) in Model II as showing the estimated relationship for *not require bar x yale* compared to the held-out case for Model 1. To put it another way, the coefficient for variable (c), *yale*, in Model II, equals the coefficient for variable (a), *not require bar x yale*, in Model I. Additionally, the coefficient for variable (d), *require bar x yale*, in Model II equals: the coefficient for (b), *require bar x yale*, in Model I *minus* the coefficient for (a), *not require bar x yale*, in Model I. The coefficient for variable (d) in Model II, then, *require bar x yale*, shows the difference between *require bar x yale* and *not require bar x yale.*[33] The reported results use the style illustrated in Model II.

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[31] *Schools of Law*, *supra* note 8.

[32] *See supra* text following note 30.

[33] For example, Table 6, Model 1, shows the following coefficients: *yale*: 0.889; *req. bar x yale:* -1.171. Re-estimating that model substituting, for each of the 18 school variables, [school variable], the following, *not require bar x [school variable]*, yields the following estimated coefficients: *not require bar x yale:* 0.889; and *require bar x yale*: -0.282; -0.282 - 0.889 = -1.171.

Opinion Topics. This model controls for the topics addressed by the opinions. It includes forty-two variables, each reflecting the number of times one of the topics is assigned by Lexis to a portion of the opinion.

Change in Circuit Philosophy—JCS Score; Year Dummies. As discussed by Frank Cross among others,[34] it is possible the political party of the president who appointed the judge may be related to that judge's reversal rate. Of course, for each judge, that party affiliation will not change in the data set, and, therefore, cannot be included in the conditional (fixed effects) logistic regressions. It is possible, however, that a change in the appellate federal judiciary over the time periods studied may influence a judge's reversal rate. For example, if a circuit becomes increasingly liberal, district court judges appointed by Carter may become less likely to be reversed.

The model interacts the "judicial common space" scores referenced above[35] with seven dummy variables: whether the judge was appointed by G.H.W. Bush, Carter, Clinton, Ford, Lyndon Johnson, Nixon or Reagan.

The model also incorporates six dummy variables for six of the seven year-periods represented in the sample.

Age. Because the sample covers six and one-half years and the models are conditional logits, it was this author's initial expectation that age-related changes in likelihood of reversal would be insignificant. A prior draft (which used a smaller sample and somewhat different variables) was criticized for omission of judge age.[36] For this reason, *age*, defined as the year of the opinion minus the judge's birth year, is included. Because any relationship may be nonlinear, that variable squared also is included. As will be seen, the parameter estimate for each always is not statistically significant.

b. Alternative Models—220 Dummy Variables and Logistic Random-Intercept Logistic Regression

For the reasons discussed above, the sample size (the number of observations per judge) engenders concern with estimating the likelihood of reversal using a logistic regression containing one dummy variable for each of the 220 judges. However, notwithstanding that concern, one might be curious as to the difference

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[34] Frank B. Cross, *Decisionmaking in the U.S. Circuit Courts of Appeals*, 91 CAL. L. REV. 1457 (2003) (stating, "Most empirical studies of ideology in decisionmaking use the political party of the judge's appointing president as a proxy for the judge's own political ideology." (citing Tracey E. George, *Developing a Positive Theory of Decisionmaking on U.S. Courts of Appeals*, 58 OHIO ST. L.J. 1625, 1651 (1998) & Donald R. Songer & Martha Humphries Ginn, *Assessing the Impact of Presidential and Home State Influences on Judicial Decisionmaking in the United States Courts of Appeals*, 55 POL. RES. Q. 299 (2002)).

[35] *See supra* notes 23-24 and accompanying text.

[36] John Donohue, *supra* note 27 ("Judges were getting older over the course of the two time periods, and they were also gaining experience. Might these factors influence the rate of negative signals? They well might, suggesting that a control for judge's age should likely be included, which Barondes fails to do.").

between the two estimations (and the casual reader, not seeing coefficients for each judge, might erroneously conclude conditional (fixed effects) results are not reported). For that reason, results of such a model are also included.

Lastly, one concern with reviewing the results of a conditional (fixed effects) logistic regression is that any variable that is invariant for a judge in the sample, e.g., whether the judge expects clerks to take the bar, is not separately estimated. One may, however, estimate a relationship that does reveal the relationship for such variables using a random-intercept logistic regression, which is also estimated. This model includes the following additional independent variables: six dummy variables, one reflecting whether the judge was appointed by Presidents G.H.W. Bush, Ford, Carter, Johnson, Reagan or Clinton (a dummy variable for only other President represented in the sample, Nixon, being held-out); whether the judge expects clerks to take the bar; and eleven dummy variables, one for each federal circuit other than the Tenth.

However, the validity of such a model requires the random intercept be uncorrelated with the explanatory variables.[37] Such a strong assumption is typically suspect in this type of data not involving data produced by random assignment of clerks.[38] One can perform a Hausman test to assess the propriety of such a model, although the results of such a test frequently are not informative.[39] Nevertheless, for convenience of the reader, results from such a model are also reported.

Results for Model 2 are computed using robust standard errors clustered for 220 clusters (judge id). Alternative options for computing standard errors are not provided in Stata for the random-intercept logistic regression.

2. Estimation of the Reversal Rate

As a second approach, for confirming any relationship between clerk schools and likelihood of a *warning* signal found using the conditional (fixed effects) logistic regressions, one can estimate the frequency (i.e., a percentage expressed as a decimal) with which the judge's opinions have a *warning* signal in any particular 12-month period.[40] Eliminating judge-periods for judges whose frequency of reversal is the same for each 12-month period yields a total of 1,202 judge periods. (Elimination of judge-periods for judges whose rate of a *warning* signal does not change is required because dummy variables for each judge are used in the models, and the judge-specific dummy variables would fully predict the dependent variable for those judges.)

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[37] *See* JEFFREY M. WOOLDRIDGE, INTRODUCTORY ECONOMETRICS: A MODERN APPROACH 489 (4th ed. 2009).

[38] *See generally id.* at 493.

[39] 1 STATACORP LP, supra note 28, at 549 ("happens fairly often").

[40] As noted above, one of the periods is only six months. Solely for ease of exposition, the discussion here references year (12-month) periods, because reference to "six year periods and one six-month period" is awkward.

Certain independent variables used in models of the likelihood of a *warning* signal are included without any modification:

- 7 variables interacting the judicial common space score of the circuit with the judge's appointing president;
- the judge's age and age squared for the period; and
- a dummy variable for each judge.

Other independent variables are included in a form that is transformed from the form used to estimate the logistic regressions. The transformation is to take mean values of those variables within the sample of opinions the particular judge issued in the pertinent 12-month period. The independent variables included in this transformed basis are:

- 18 variables reflecting the mean value of the fraction of the judge's clerks from each of the top 18 law schools during the pertinent 12-month period;
- 18 variables reflecting each of those school variables interacted with a dummy variable indicating the judge expects clerks to take the bar; and
- 42 variables reflecting the mean values of the 42 topic variables for the judge's opinions within the pertinent 12-month period.

Results of seven different models are estimated using these variables. The dependent variables of the observations are fractions of opinions having *warning* signals taken from populations of varying sizes. Some judge-periods have only a few opinions, whereas others have substantial numbers. Thus, the variance in the observed reversal rates will be related to the number of observations in the period, yielding heteroskedasticity. To properly adjust for that, one can estimate a weighted least squares with weights equal to the number of opinions in the judge period.[41] Model 1 in Table 8 reports that estimation, using analytic weights.

For purposes of comparison only, Models 3, 4 and 5 report results of similar ordinary least squares estimations not incorporating the weights. Models 4 and 5 estimate the relationship shown in Model 3, but in subsamples eliminating judge-periods containing fewer than 5 and 20 opinions, respectively. Model 2, shows the results for Model 1 re-estimated on the subsample eliminating judge-periods containing fewer than 5 opinions.

Lastly, one might seek to estimate this fractional dependent variable using a generalized linear model with a logit link and the binomial family.[42] The results of the corresponding estimations are shown in Table 8, Model 6 for all 1,202 judge-periods and the restricted subsample of 1,045 judge-periods containing at least 5 opinions in Table 8, Model 7.

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[41] *See* WOOLDRIDGE, *supra* note 37, at 281-82 (discussing use of weighting when using "per capita data at the city, county, state or country level").

[42] *See generally* Leslie E. Papke & Jeffrey M. Wooldridge, *Econometric Methods for Fractional Response Variables with an Application to 401(k) Plan Participation Rates*, 11 JOURNAL OF APPLIED ECONOMETRICS 619 (1996).

All models in Table 8 report robust standard errors adjusted for 210 (where there are 1,202 observations), 197 (where there are 1,045 observations) or 105 (where there are 500 observations) judge clusters.

IV. RESULTS

1. Likelihood of Reversal

Table 6 presents the results of estimating the likelihood an opinion will be have a *warning* signal. As to the relationship between clerk school and likelihood of a *warning* signal, the results in all three estimations (conditional (fixed effects) logistic regression, logistic regression with 220 dummy variables and random-intercept logistic regression) are similar.[43] The parameter estimates for the following schools are statistically significant:

- *yale* (1%, 1% and 1% levels, respectively);
- *nyu* (10%, 10% and 10% levels, respectively);
- *berkeley* (not significant, not significant and 10% level);
- *northwestern* (10%, 10% and 5% levels, respectively); and
- *usc* (negative; significant at the 5%, 5% and 10% levels, respectively).

As to the variable of interest, *yale*, Stata restates the parameter estimate for *yale* in Table 6, Model 1, as an odds ratio as the following: 2.433. The magnitude of the parameter estimate is, then, qualitatively significant.

It also bears reiteration[44] that the coefficient for *yale* in this model is the same as would be estimated for *not require bar x yale* if one were to include school variables of the form *not require bar x* [school variable] and *require bar x* [school variable]. The coefficient, then, shows the estimated impact of a fraction of clerks from Yale Law School not required to take the bar compared to the held-out case.

Turning to the adequacy of the random-intercept model, first one may note that the 95% confidence interval of rho is 0.034 to 0.069. Turing to the Hausman test, that test (applied to models without robust standard errors) does not provide substantial assurance that the assumptions underlying the use of the random-intercept logistic regression are warranted. The covariance matrix of the differences is not positive definite, with the rank of the differenced variance matrix (67) not equaling the number of coefficients being tested (93). Re-performing the Hausman test after transforming the topic variables by (1/1 + *variable*) produces a negative chi^2 statistic, for which there is some basis for interpreting as supporting the adequacy of the random-intercept model.[45] In these unreported regressions

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[43] The adequacy of the quadrature approximation used in the random-intercept logistic regression was checked using Stata's "quadchk" tool, which re-estimates the model using different numbers of quadrature points from the number used in the reported estimation (120). The relative differences meet the benchmark of not more than 0.01%.

[44] *See supra* note 33 and accompanying text.

[45] 1 STATACORP LP, supra note 28, at 549.

transforming the topic variables by (1/1 + *variable*), *yale* remains positive and statistically significant, while *req. bar x yale* is negative and statistically significant.

Because the results for the conditional (fixed effects) logistic regression are qualitatively similar to the random-intercept model (albeit with some variation that might be of interest as to schools other than Yale Law School), any indeterminacy in the Hausman test is not a significant concern. The random-intercept model was prepared for purposes of assessing whether the alternative modeling technique would produce results that would, were its assumptions appropriate to make, yield different interpretations from those of the conditional (fixed effects) logistic regressions. They do not.

The results for *yale* are not the spurious product of having hyper-specified the independent variables of the model. Recall Table 4 shows a difference in the mean value of *yale* between subsamples of opinions having and not having a *warning* signal of 0.017 (1.7 percentage points), whereas the difference for each other school is less than 0.01. Moreover, re-estimating the results from Table 6, Model 1, dropping (i) all school variables other than the two for Yale Law School and (ii) all other independent variables other than the judicial common space interaction variables (i.e., keeping a total of only nine independent variables), shows similar results for *yale* (coefficient of 0.780, *t*-statistic of 2.81) and *req. bar x yale* (coefficient of -1.070, *t*-statistic of -2.98). The results remain, even with a very parsimonious model.

The parameter estimate interacting the school variable with *require bar* yields only one variable, that for *yale*, that is statistically significant in all three models in Table 6. As hypothesized, that parameter estimate is negative. As to the other schools, in only two cases, *northwestern* and *pennsylvania*, is the interaction significant, and, for each, it is only significant in the random effects model.

A commentator on a prior draft[46] recommended comparison between Yale Law School and each of Harvard Law School and Stanford Law School: "One could add controls for other top schools—perhaps Harvard and Stanford—and then test whether their estimated effects are different from the Yale control. Again, I doubt there will be a difference in the direction the author states."[47] The *p*-value for rejecting equivalence of the parameter estimate of *yale* with either *stanford* or *harvard* is less than 0.01 for each of three models. The *p*-value for rejecting equivalence of the parameter estimate of *req. bar x yale* with either *req. bar x stanford* or *req. bar x harvard* is 0.10 or less in each of the three models.

Because the pseudo-R^2 for the conditional (fixed effects) logistic regression reported in Table 6, Model 1, 0.0275, is not particularly informative, one may

[46] The data set used in that prior draft did not include whether the judge expected clerks to take the bar.

[47] John Donohue, *supra* note 27.

compare the predicted and actual values of *warning* signal. Because doing so for the conditional (fixed effects) logistic regression is problematic, the following table reports that for Model 2:

Table 7. Comparison of Predicted and Actual

	Actual		
	warning	not *warning*	Total
Predicted:			
warning	32	29	61
not *warning*	2446	33,600	36,046
Total	2478	33,629	36,107

This estimation correctly classifies 93.15% of the observations: 52.46% of those opinions predicted to have a *warning* signal have that signal; and 93.21% of those opinions predicted not to have a *warning* signal do not have a warning signal. As to whether the prediction is sufficiently better than simply predicting no *warning* for the results of the parameter estimates to be informative—or, to put it another way, whether there is too much noise—is ultimately a matter of judgment. However, for confirming the results, reference may be made to the results estimating rates of *warning* signals, below.

Although not directly relevant to the hypotheses this paper examines, the coefficients on the judicial common space variables are of some interest. Turning first to the conditional (fixed effects) logistic regressions (Table 6, Model 1), some are as might be anticipated. The sign for *jcs x G.H.W.B* is negative and significant, indicating a lower likelihood of reversal of his appointees where the jcs score is higher (i.e., the circuit bench is more conservative). The sign is positive and significant for *jcs x J.C.*

The results for Presidents Ford, Johnson, Reagan and Clinton are interesting. The sign is positive and significant for *jcs x G.R.F.*, and negative and significant for *jcs x L.B.J.* On the other hand, the parameter estimates for *jcs x R.R.* and *jcs x W.J.C.* are both positive and not significant.

The results for these circuits are not generally robust to re-specification of the model as a random-intercept logistic regression. In that case, only the variables for Johnson and Carter remain significant, and in those cases only at the 10% levels.

2. Warning Rate

Table 8 shows the results estimating the *warning* rate for each judge period. The most pertinent results are those in Models 1 and 6 of Table 8, the other estimations being helpful for showing the difference between weighted estimations and unweighted estimations. The parameter estimates for the following schools are statistically significant:

- *yale* (5% and 5% levels);
- *nyu* (not significant and 10% level);

- *berkeley* (10% and 5% levels);
- *cornell* (5% and 5% levels);
- *northwestern* (not significant and 10% level); and
- *usc* (negative, 10% and 5% levels)

The *p*-value for rejecting the equivalence of *yale* and either *stanford* or *harvard* is 0.10 or less in each of the two models. The parameter estimates interacting school and *requires bar* are statistically significant only for:

- *harvard* (negative, 10% and 10%); and
- *duke* (10% and 5%).

3. Comparison of Results from Different Approaches to Modeling

Combining the results from Table 6, Models 1 and 3 and Table 8, Models 1 and 6, only for Yale Law School is the parameter estimate for the fraction of a judge's clerks from that school consistently positive and statistically significant at the 5% level or better.

The parameter estimates for *yale* are comparable between models estimating the likelihood of a *warning* signal and those estimating the *warning* rate. In the sample of 36,107 opinions, 6.9% of the opinions have a warning signal, i.e., the mean value of *warning* is 0.069. Stata restates the parameter estimate for *yale* in Table 6, Model 1, as an odds ratio as the following: 2.433. The parameter estimate for *yale in* Table 8, Model 1, estimating the *warning* rate, is 0.065. The models, then, predict relationships for *yale* that are roughly comparable in order of magnitude—doubling from *yale* = 0 to *yale* = 1.[48]

Pairwise comparisons between Yale Law School and each of Stanford Law School and Harvard Law School show that where clerks are not expected to take the bar, an increasing fraction of clerks from Yale Law School is associated with increasing reversals relative to these two comparable schools. As to clerks not expected to take the bar, those from Yale Law School are in a class of their own.

On the other hand, the change in impact arising from having the clerks expected to take the bar is not consistent between the models having the different dependent variables (estimating a *warning* and estimating the rate of *warning* signals). Although *req. bar x yale* is negative and statistically significant at the 5% level or better in Table 6 (estimating the presence of a *warning* signal), none of

[48] Of course, a percentage change in frequency does not correspond 1:1 to a change in odds ratio--doubling the frequency does not mean the odds ratio doubles—though the relationship is close where the frequency is small. The point made here is the two are comparable in magnitude. The likelihood of reversal depends, of course, on the other independent variables. Because extracting predicted probabilities in a conditional (fixed effects) logistic regression is problematic, and the point is there is a statistically significant relationship that is qualitatively significant in magnitude, and of comparable order of magnitude between the models, no precise computations of predictions are provided.

these interaction variables is negative and significant at the 5% level or better in either of Table 8, Model 1 or 6, estimating the *warning* rate.

No conclusions are drawn as to the results for schools other than Yale Law School for which there are statistically significant results (in some models), because there were no a priori hypotheses as to those other schools.

4. Alternative Interpretation of a Relationship

It also bears mention that the investigation cannot definitively pinpoint the reason why clerks from Yale Law School may be associated with an increased likelihood of reversal. It could reflect the emphasis of theory at the law school.[49] There are other possibilities. It could be produced by great flexibility in the curriculum that causes students to be less familiar with the subjects that are most pertinent to reaching legal conclusions in federal district court opinions.[50] Another possibility is a grading system that is not sufficiently partitioned to allow judges to identify the quality of applicants.[51] Indeterminacy in choice among these possible underlying reasons is, however, not relevant to the main issue addressed by this paper: whether clerks matter.

John Donohue, in discussing a prior draft of this paper, asserted, "[A] liberal judge like Judge Jon Newman in the early 1970s might have gotten lots of 'negative' ratings as he was trying to push the law in a direction about which the Burger court was skeptical…. Ironically, then, some of the best judges might have high negative ratings. If these are the judges who are selecting Yale Law students (as Newman for one tended to do), then the true fact would be 'pioneering judges tend to select Yale Law students....' "[52] Because this paper reports (and its prior drafts reported) results of conditional (fixed effects) logistic regressions, the results control for the judge's overall (within sample) number of reversals. That criticism is simply inapposite.

Moreover, it is more plausible judges who are dissatisfied with current doctrine are more inclined to change the doctrine without being reversed. A reversal would demonstrate failure in an attempt to change the law. However, it is possible clerk characteristics could influence a judge's willingness to risk reversal. That interpretation is consistent with the basic premise investigated by this paper—that clerks matter.

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[49] *See supra* notes 4-8 and accompanying text.

[50] *See generally* VAULT INC., *supra* note 5, at 123 ("The JD program is very unstructured . . . Students essentially have two and a half years to take whatever classes they choose, and there is little institution [sic] guidance on what to take leading to fairly haphazard coverage of legal topics. (For instance, property is not a required class, though it is an important part of the bar exam.)").

[51] *See generally id.* at 124 ("Yale's program is unique among top law schools in that we don't have grades. Officially, there's a system of honors, pass, low pass and fail, but three-quarters or more of the class gets a pass, and professors rarely give out low passes (you really have to anger a prof to get one).").

[52] John Donohue, *supra* note 27.

Yet the results of the logistic regressions show a negative relationship for requiring the bar interacted with *yale*. A straightforward interpretation is clerks matter, clerks from Yale Law School are not as familiar with doctrine as their peers are, but that deficit is addressed by studying for the bar. However, it is possible that a complex sorting mechanism, as opposed to familiarity with doctrine, accounts for the results. Before turning to the details of the alternative interpretation, it bears mention, however, that even this complex sorting mechanism is consistent with clerks mattering.

In this sorting mechanism, in brief, there are two types of clerks from Yale Law School, those who influence judges in ways that make their judges less concerned about being reversed (increasing those judges' likelihood of reversal), and those who don't.[53] The former category of Yale Law School graduates disproportionately clerks for judges who don't require the bar, not requiring the bar either signaling something those prospective clerks find attractive or being related to something about the judges this class of clerks finds appealing when choosing a clerkship.

Accounting for the difference in the logistic regressions between graduates of Yale Law School and those of Harvard Law School and Stanford Law School requires either a disproportionate amount of these types of clerks (clerks who cause judges to be more willing to risk reversal) are from Yale Law School or that they, relative to their peers from Harvard Law School or Stanford Law School, are more likely to be matched to judges likely to be influenced (the sorting works better for them). To be clear, however, even this sorting interpretation is consistent with clerks mattering. Because the paper estimates fixed effects models, we do not attribute the results to some judge characteristic that is invariant for each judge throughout the sample.

CONCLUSION

This paper provides evidence useful in assessing whether clerks to federal district court judges "matter" in the sense of potentially influencing judicial opinions. For that purpose, using a sample of 36,107 opinions written by 220 federal district court judges, this paper examines the relationship between the likelihood an opinion has a Shepard's *warning* signal (roughly equivalent to a reversal) and certain attributes of the clerks, including whether they are expected to take the bar and the law schools they attended.

The primary results are from conditional (fixed effects) logistic regressions, which are confirmed using a random-intercept logistic regression (as well as a logistic regression using 220 dummy variables, one for each judge). Those primary results report estimations conditional on the number of reversals a judge has in the sample. This estimation technique controls for the possibility that judges who hire

[53] Of course, this description of two separate classes of clerks is merely a simplification for ease of exposition. More probable would be a continuum along which clerks are arrayed.

Yale clerks are more likely to be reversed. The models reveal a positive relationship between the likelihood of a *warning* signal and the fraction of clerks from Yale Law School, where clerks are not required to take the bar.

The results still obtain using a very parsimonious model. For purposes of further confirming the results, this paper also estimates judges' fractions of opinions having *warning* signals, collapsing the data set to 1,202 observations using weighted least squares and a generalized linear model with logit link and analytic weights.

The one consistent relationship for school variables is the following: where the judge does not require clerks to take the bar, the fraction of a judge's clerks from Yale Law School is positively associated with increased likelihood or frequency of a *warning* signal. Yale Law School is in its own class.

Although the most direct rationale for this relationship—that, consistent with its reputation, Yale Law School de-emphasizes doctrine and clerks' knowledge of doctrine matters—a complex sorting mechanism between judges and clerks, in which some clerks from Yale Law School cause their judges to be indifferent to reversal and somehow either a sorting mechanism causes Yale graduates to be disproportionately matched to vulnerable judges or there are disproportionately more such clerks from Yale Law School. There are other plausible interpretations, including some addressing inadequate partitions of student grades. However, each of these interpretations is consistent with the principal premise: clerks matter.

Table 1

Law school frequencies of the 50 most frequent schools of the clerks for 220 federal district court judges in the sample, whose schools were identified in seven *Judicial Yellow Books* (Spring 1997 through Spring 2003). These 220 federal district court judges reported in those *Judicial Yellow Books* a total of 2,767 clerks whose schools were identified.

School	Frequency
Harvard University (MA)	170
New York University	120
University of Michigan-Ann Arbor	114
Yale University (CT)	110
Columbia University (NY)	107
Georgetown University (DC)	87
University of Virginia	67
University of Pennsylvania	66
Stanford University (CA)	61
University of California-Berkeley	56
University of Texas-Austin	53
Northwestern University (IL)	50
Duke University (NC)	49
University of Chicago	45
Cornell University (NY)	41
Tulane University (LA)	41
University of Minnesota-Twin Cities	39
Fordham University (NY)	37
University of California-Los Angeles	35
Indiana University-Bloomington	31
Temple University (Beasley) (PA)	31
Northeastern University (MA)	29
University of Pittsburgh	27
Southern Methodist University (TX)	26
University of Notre Dame (IN)	26
University of Georgia	25
University of Illinois-Urbana-Champaign	25
Vanderbilt University (TN)	25
University of Arizona	24
University of North Carolina-Chapel Hill	24
George Washington University (DC)	23
University of Alabama	23
University of Southern California	22
Boston College	21
Rutgers State University-Camden (NJ)	21
University at Buffalo	20
University of Kentucky	20
University of Missouri-Kansas City	20
University of New Mexico	20
Washington and Lee University (VA)	20

Table 2

Summary statistics of the averages of the clerkship information for the 220 judges in the sample. For each of the 220 judges in the sample, the average among that judge's opinions of the clerk school statistics was computed. This table presents the mean, median, minimum, maximum and standard deviation of the 220 judge averages.

	mean	med	min	max	sd
yale	0.040	0.000	0.000	0.455	0.091
stanford	0.024	0.000	0.000	0.500	0.069
harvard	0.065	0.000	0.000	0.667	0.114
nyu	0.041	0.000	0.000	0.504	0.085
columbia	0.039	0.000	0.000	0.911	0.108
chicago	0.018	0.000	0.000	0.500	0.061
michigan	0.042	0.000	0.000	0.885	0.105
berkeley	0.020	0.000	0.000	0.492	0.065
virginia	0.027	0.000	0.000	0.803	0.093
cornell	0.014	0.000	0.000	0.734	0.061
duke	0.017	0.000	0.000	0.364	0.055
northwestern	0.020	0.000	0.000	0.577	0.071
pennsylvania	0.021	0.000	0.000	0.514	0.073
georgetown	0.029	0.000	0.000	0.500	0.079
texas	0.018	0.000	0.000	0.889	0.089
ucla	0.015	0.000	0.000	0.634	0.064
usc	0.010	0.000	0.000	0.669	0.059
vanderbilt	0.009	0.000	0.000	0.623	0.057

Table 3

Summary statistics within the sample of clerk variables for top 18 *U.S. News & World Report* law schools, and within the subsamples of judges who require the bar and those who do not.

Panel A: all (36,107 opinions)

	mean	med	min	max	sd
yale	0.056	0	0	1	0.169
stanford	0.032	0	0	1	0.114
harvard	0.087	0	0	1	0.195
nyu	0.057	0	0	1	0.166
columbia	0.065	0	0	1	0.185
chicago	0.036	0	0	0.5	0.122
michigan	0.054	0	0	1	0.163
berkeley	0.018	0	0	1	0.092
virginia	0.018	0	0	1	0.097
cornell	0.014	0	0	1	0.080
duke	0.014	0	0	1	0.080
northwestern	0.027	0	0	1	0.115
pennsylvania	0.025	0	0	1	0.112
georgetown	0.027	0	0	1	0.113
texas	0.015	0	0	1	0.086
ucla	0.007	0	0	1	0.054
usc	0.004	0	0	1	0.047
vanderbilt	0.005	0	0	1	0.048

Panel B: require bar (13,647 opinions)

	mean	med	min	max	sd
yale	0.030	0	0	1.000	0.138
stanford	0.017	0	0	0.500	0.083
harvard	0.050	0	0	1.000	0.153
nyu	0.022	0	0	1.000	0.100
columbia	0.028	0	0	1.000	0.120
chicago	0.028	0	0	0.500	0.108
michigan	0.067	0	0	1.000	0.176
berkeley	0.009	0	0	0.500	0.063
virginia	0.015	0	0	1.000	0.085
cornell	0.010	0	0	0.500	0.065
duke	0.018	0	0	1.000	0.094
northwestern	0.028	0	0	1.000	0.125
pennsylvania	0.011	0	0	0.500	0.068
georgetown	0.024	0	0	0.667	0.105
texas	0.012	0	0	1.000	0.085
ucla	0.007	0	0	1.000	0.054
usc	0.004	0	0	1.000	0.046

vanderbilt	0.002	0	0	0.500	0.025

Panel C: not require bar (22,460 opinions)

	mean	med	min	max	sd
yale	0.073	0	0	1	0.184
stanford	0.041	0	0	1	0.129
harvard	0.109	0	0	1	0.214
nyu	0.079	0	0	1	0.192
columbia	0.087	0	0	1	0.213
chicago	0.040	0	0	0.5	0.129
michigan	0.046	0	0	1	0.154
berkeley	0.024	0	0	1	0.106
virginia	0.020	0	0	1	0.103
cornell	0.016	0	0	1	0.088
duke	0.011	0	0	1	0.070
northwestern	0.026	0	0	0.5	0.108
pennsylvania	0.033	0	0	1	0.131
georgetown	0.028	0	0	1	0.118
texas	0.017	0	0	0.5	0.086
ucla	0.007	0	0	0.5	0.054
usc	0.004	0	0	1	0.048
vanderbilt	0.006	0	0	1	0.058

Table 4

Summary statistics showing the frequencies of various school variables in subsets of (i) opinions having a *warning* signal; (ii) opinions having a *warning* signal authored by judges who require the bar; (iii) opinions having a *warning* signal authored by judges who do not require the bar; and (iv) opinions not having a *warning* signal.

	warning = 1			*warning* =0	Difference mean *warning*=1 – *warning*=0
	all	*require bar*	*not require bar*	*all*	
No. Obs.	2,478	980	1,498	33,629	
variable	Mean	Mean	Mean	Mean	
yale	0.072	0.027	0.102	0.055	0.017
stanford	0.025	0.017	0.030	0.032	-0.008
harvard	0.080	0.046	0.103	0.088	-0.007
nyu	0.056	0.018	0.080	0.058	-0.002
columbia	0.060	0.024	0.083	0.065	-0.005
chicago	0.034	0.033	0.034	0.036	-0.002
michigan	0.055	0.071	0.044	0.054	0.001
berkeley	0.024	0.013	0.031	0.018	0.006
virginia	0.019	0.021	0.018	0.018	0.001
cornell	0.016	0.010	0.020	0.014	0.002
duke	0.018	0.025	0.014	0.013	0.005
northwestern	0.026	0.028	0.025	0.027	-0.001
pennsylvania	0.027	0.008	0.039	0.024	0.002
georgetown	0.028	0.023	0.031	0.027	0.001
texas	0.016	0.018	0.015	0.015	0.002
ucla	0.010	0.007	0.011	0.007	0.003
usc	0.005	0.006	0.004	0.004	0.001
vanderbilt	0.005	0.003	0.006	0.004	0.001

Table 5

Summary statistics of the 42 Lexis topics within the sample of 36,107 opinions.

	mean	med	min	max	sd
administrative law	0.251	0	0	27	1.210
admiralty law	0.085	0	0	102	1.057
antitrust and trade law	0.153	0	0	61	1.519
banking law	0.101	0	0	54	1.080
bankruptcy law	0.196	0	0	61	1.644
business and corporate law	0.152	0	0	34	1.041
civil procedure	4.786	3	0	139	6.158
civil rights law	0.593	0	0	45	2.193
commercial law ucc	0.054	0	0	54	0.775
communications law	0.055	0	0	56	0.875
computer and internet law	0.028	0	0	46	0.542
constitutional law	0.592	0	0	71	2.323
contracts law	0.536	0	0	44	2.034
copyright law	0.111	0	0	52	1.486
criminal law and procedure	1.798	0	0	201	5.954
education law	0.099	0	0	47	1.274
energy and utilities law	0.034	0	0	73	0.736
environmental law	0.179	0	0	191	2.387
estate gift and trust law	0.028	0	0	42	0.388
evidence	0.381	0	0	57	1.603
family law	0.038	0	0	36	0.508
governments	0.814	0	0	116	2.271
healthcare law	0.059	0	0	35	0.655
immigration law	0.081	0	0	62	1.155
insurance law	0.196	0	0	44	1.410
international law	0.055	0	0	60	0.826
international trade law	0.037	0	0	18	0.406
labor and employment law	1.278	0	0	92	4.497
legal ethics	0.052	0	0	26	0.510
military and veterans law	0.007	0	0	20	0.212
patent law	0.300	0	0	114	2.958
pensions and benefits law	0.221	0	0	49	1.666
public contracts law	0.020	0	0	34	0.438
public health and welfare law	0.196	0	0	43	1.358
real property law	0.132	0	0	32	0.982
securities law	0.224	0	0	82	2.275
tax law	0.122	0	0	44	1.159
torts	0.722	0	0	50	2.428
trade secrets law	0.025	0	0	26	0.487
trademark law	0.224	0	0	80	2.607
transportation law	0.056	0	0	54	0.612
workers compensation and ssdi	0.162	0	0	39	1.328

Table 6. Estimation of the Likelihood an Opinion Will Be Reversed

Estimation of the likelihood an opinion will have a Shepard's *warning* signal. Model 1 is conditional (fixed effects) logistic regression estimation, with robust standard errors clustered for 220 clusters (judge id). Model 2 is a logistic regression incorporating a dummy variable for each of 220 judges, with robust standard errors clustered for 220 clusters (judge id). Model 3 reports results of a logistic random-intercept model (group variable comprising judge id, with 220 groups). Number of observations for each model is 36,107. *t*-statistics in brackets below coefficients. Significance at 1%, 5% and 10% levels identified by ***, ** and *, respectively.

Model:	(1) Conditional (Fixed Effects)	(2) Logistic Regression w/ 220 Dummy Vars.	(3) Random-Intercept
Constant			-4.432***
			[-2.653]
yale	0.889***	0.893***	0.846***
	[2.618]	[2.616]	[4.414]
stanford	-0.248	-0.250	-0.568*
	[-0.582]	[-0.580]	[-1.882]
harvard	-0.075	-0.075	-0.054
	[-0.286]	[-0.282]	[-0.304]
nyu	0.417*	0.419*	0.379**
	[1.743]	[1.739]	[2.081]
columbia	0.194	0.195	0.214
	[0.438]	[0.438]	[1.036]
chicago	0.112	0.113	0.039
	[0.200]	[0.201]	[0.121]
michigan	-0.195	-0.196	-0.181
	[-0.526]	[-0.525]	[-0.737]
berkeley	0.468	0.472	0.496*
	[1.218]	[1.216]	[1.658]
virginia	-0.226	-0.229	-0.162
	[-0.451]	[-0.452]	[-0.483]
cornell	0.376	0.377	0.466
	[0.710]	[0.706]	[1.287]
duke	-0.276	-0.280	0.048
	[-0.557]	[-0.558]	[0.117]
northwestern	0.846*	0.853*	0.747**
	[1.782]	[1.780]	[1.986]
pennsylvania	0.441	0.444	0.428
	[0.990]	[0.989]	[1.611]
georgetown	-0.278	-0.280	-0.236

	[-0.907]	[-0.909]	[-0.874]
texas	0.379	0.380	0.537
	[0.554]	[0.553]	[1.150]
ucla	0.590	0.595	0.487
	[0.785]	[0.780]	[0.961]
usc	-1.628**	-1.651**	-1.323*
	[-2.005]	[-2.000]	[-1.949]
vanderbilt	-0.287	-0.290	0.016
	[-0.347]	[-0.341]	[0.025]
require bar x yale	-1.171**	-1.176**	-1.385***
	[-2.336]	[-2.327]	[-3.539]
require bar x stanford	0.586	0.592	0.637
	[1.058]	[1.060]	[1.128]
require bar x harvard	-0.322	-0.325	-0.389
	[-0.753]	[-0.754]	[-1.153]
require bar x nyu	-0.773	-0.776	-0.757
	[-1.529]	[-1.525]	[-1.622]
require bar x columbia	-0.188	-0.188	-0.344
	[-0.269]	[-0.268]	[-0.813]
require bar x chicago	-0.315	-0.317	-0.154
	[-0.338]	[-0.339]	[-0.307]
require bar x michigan	0.710	0.713	0.552
	[1.427]	[1.422]	[1.584]
require bar x berkeley	0.825	0.839	0.791
	[1.041]	[1.049]	[1.283]
require bar x virginia	0.727	0.735	0.741
	[0.992]	[0.991]	[1.423]
require bar x cornell	0.239	0.243	-0.329
	[0.263]	[0.264]	[-0.471]
require bar x duke	1.290	1.304	0.489
	[1.614]	[1.614]	[0.870]
require bar x northwestern	-0.944	-0.955	-0.959*
	[-1.526]	[-1.529]	[-1.848]
require bar x pennsylvania	-1.214	-1.224	-1.433**
	[-1.266]	[-1.263]	[-2.013]
require bar x georgetown	0.248	0.251	0.013
	[0.432]	[0.434]	[0.026]
require bar x texas	-0.091	-0.089	0.657
	[-0.107]	[-0.104]	[1.050]
require bar x ucla	-1.024	-1.041	-0.817
	[-0.902]	[-0.903]	[-0.983]
require bar x usc	0.521	0.526	1.070
	[0.574]	[0.570]	[1.127]

require bar x vanderbilt	-0.213	-0.217	0.437
	[-0.152]	[-0.152]	[0.327]
administrative law	-0.010	-0.010	-0.009
	[-0.594]	[-0.601]	[-0.503]
admiralty law	0.057***	0.058***	0.057***
	[3.674]	[3.687]	[3.292]
antitrust and trade law	0.033***	0.034***	0.033***
	[3.841]	[3.824]	[3.564]
banking law	0.029*	0.030*	0.029**
	[1.868]	[1.848]	[1.966]
bankruptcy law	0.028**	0.029**	0.029***
	[2.395]	[2.392]	[2.894]
business and corporate law	0.018	0.018	0.017
	[0.878]	[0.881]	[0.986]
civil procedure	0.004	0.004	0.004
	[1.047]	[1.049]	[1.202]
civil rights law	0.008	0.007	0.005
	[0.855]	[0.836]	[0.544]
commercial law ucc	0.008	0.008	0.008
	[0.296]	[0.299]	[0.337]
communications law	0.056***	0.057***	0.058***
	[3.578]	[3.559]	[3.750]
computer and internet law	0.003	0.003	-0.004
	[0.086]	[0.087]	[-0.115]
constitutional law	0.042***	0.043***	0.045***
	[4.783]	[4.787]	[6.330]
contracts law	0.031***	0.031***	0.029***
	[3.073]	[3.074]	[3.130]
copyright law	0.033***	0.033***	0.034***
	[3.052]	[3.044]	[3.575]
criminal law and procedure	0.014***	0.014***	0.014***
	[3.983]	[3.976]	[4.939]
education law	0.015	0.016	0.014
	[1.016]	[1.017]	[1.052]
energy and utilities law	0.031*	0.031*	0.030*
	[1.661]	[1.649]	[1.684]
environmental law	0.036***	0.036***	0.035***
	[3.890]	[3.853]	[4.880]
estate gift and trust law	-0.003	-0.003	-0.007
	[-0.077]	[-0.079]	[-0.140]
evidence	0.035***	0.036***	0.037***
	[3.037]	[3.031]	[3.611]
family law	0.029	0.030	0.034

	[0.865]	[0.862]	[1.109]
governments	0.019**	0.019**	0.020**
	[2.087]	[2.095]	[2.434]
healthcare law	-0.036	-0.036	-0.037
	[-0.985]	[-0.982]	[-1.010]
immigration law	0.013	0.014	0.013
	[0.977]	[0.973]	[0.874]
insurance law	0.029**	0.029**	0.028**
	[2.044]	[2.044]	[2.318]
international law	0.049**	0.050**	0.051***
	[1.981]	[1.970]	[3.031]
international trade law	0.068	0.069	0.065*
	[1.553]	[1.546]	[1.734]
labor and employment law	-0.011	-0.011	-0.011**
	[-1.530]	[-1.527]	[-2.035]
legal ethics	-0.004	-0.004	0.001
	[-0.100]	[-0.098]	[0.040]
military and veterans law	0.049	0.049	0.046
	[0.667]	[0.666]	[0.564]
patent law	0.043***	0.043***	0.043***
	[6.074]	[6.044]	[9.643]
pensions and benefits law	0.019*	0.019*	0.020*
	[1.678]	[1.673]	[1.825]
public contracts law	-0.021	-0.021	-0.015
	[-0.448]	[-0.451]	[-0.306]
public health and welfare law	0.052***	0.052***	0.051***
	[2.768]	[2.765]	[3.359]
real property law	-0.003	-0.003	-0.002
	[-0.143]	[-0.139]	[-0.129]
securities law	0.013	0.013	0.013*
	[1.302]	[1.301]	[1.757]
tax law	0.010	0.010	0.018
	[0.530]	[0.549]	[1.184]
torts	-0.009	-0.009	-0.008
	[-0.918]	[-0.927]	[-0.923]
trade secrets law	-0.030	-0.030	-0.030
	[-0.634]	[-0.635]	[-0.587]
trademark law	0.008	0.008	0.008
	[1.174]	[1.177]	[1.164]
transportation law	-0.015	-0.015	-0.012
	[-0.650]	[-0.661]	[-0.414]
workers compensation and ssdi	-0.092***	-0.092***	-0.095***
	[-3.494]	[-3.495]	[-3.274]

period ended Sept. 1, 1998	0.091	0.092	0.044
	[0.783]	[0.780]	[0.469]
period ended Sept. 1, 1999	-0.036	-0.037	-0.137
	[-0.252]	[-0.256]	[-1.416]
period ended Sept. 1, 2000	-0.084	-0.086	-0.241**
	[-0.474]	[-0.480]	[-2.381]
period ended Sept. 1, 2001	0.015	0.014	-0.220**
	[0.068]	[0.063]	[-2.223]
period ended Sept. 1, 2002	-0.042	-0.044	-0.310***
	[-0.157]	[-0.163]	[-3.098]
period ended Sept. 1, 2003	0.134	0.133	-0.194*
	[0.456]	[0.451]	[-1.890]
bush1			-0.009
			[-0.039]
ford			0.097
			[0.345]
carter			-0.045
			[-0.216]
johnson			1.800
			[1.254]
reagan			0.060
			[0.296]
clinton			0.182
			[0.774]
jcs x G.H.W.B.	-2.280**	-2.294**	-0.002
	[-2.223]	[-2.218]	[-0.004]
jcs x G.R.F.	13.442***	13.518***	0.471
	[3.417]	[3.418]	[0.554]
jcs x J.C.	2.474**	2.487**	1.179*
	[2.556]	[2.564]	[1.915]
jcs x L.B.J.	-6.651***	-6.771***	-9.531*
	[-2.978]	[-2.967]	[-1.916]
jcs x R.M.N.	4.672	4.727	-0.984
	[1.080]	[1.078]	[-1.255]
jcs x R.R.	0.142	0.144	0.663
	[0.181]	[0.181]	[1.239]
jcs x W.J.C.	1.323	1.339	0.857
	[1.348]	[1.348]	[1.531]
age	0.003	0.004	0.050
	[0.025]	[0.027]	[0.961]
age squared	-0.001	-0.001	-0.000
	[-0.535]	[-0.536]	[-0.893]
require bar			0.097

		[0.815]
First		0.151
		[0.470]
Second		-0.090
		[-0.226]
Third		-0.104
		[-0.327]
Fourth		0.088
		[0.295]
Fifth		-0.770**
		[-2.456]
Sixth		0.142
		[0.398]
Seventh		-0.174
		[-0.585]
Eighth		0.406
		[1.322]
Ninth		0.395
		[1.041]
Eleventh		0.046
		[0.144]
DC		0.677
		[1.166]
judge id 2001	0.563	
	[0.117]	
judge id 2003	-0.143	
	[-0.028]	
judge id 2004	1.105	
	[0.213]	
judge id 2005	-3.228	
	[-0.672]	
judge id 2006	1.342	
	[0.244]	
judge id 2007	-0.315	
	[-0.061]	
judge id 2008	-2.371	
	[-0.495]	
judge id 2009	-2.316	
	[-0.506]	
judge id 2010	-1.272	
	[-0.280]	
judge id 2011	0.873	
	[0.179]	

judge id 2012	-0.637
	[-0.134]
judge id 2013	-0.196
	[-0.038]
judge id 2014	0.185
	[0.038]
judge id 2015	-1.067
	[-0.213]
judge id 2016	-0.600
	[-0.120]
judge id 2019	1.485
	[0.287]
judge id 2020	-1.220
	[-0.248]
judge id 2021	1.054
	[0.211]
judge id 2022	-2.541
	[-0.585]
judge id 2023	-1.133
	[-0.232]
judge id 2024	-1.629
	[-0.355]
judge id 2025	-0.583
	[-0.119]
judge id 2026	-2.012
	[-0.396]
judge id 2027	-2.170
	[-0.460]
judge id 2028	-1.524
	[-0.331]
judge id 2029	-2.051
	[-0.428]
judge id 2030	-1.671
	[-0.377]
judge id 2032	-0.526
	[-0.102]
judge id 2033	-0.815
	[-0.170]
judge id 2034	0.384
	[0.072]
judge id 2035	-0.738
	[-0.143]
judge id 2036	-2.697

	[-0.643]
judge id 2037	-1.164
	[-0.254]
judge id 2038	-1.196
	[-0.234]
judge id 2039	-1.321
	[-0.306]
judge id 2040	-1.732
	[-0.394]
judge id 2041	-1.284
	[-0.250]
judge id 2042	-0.281
	[-0.056]
judge id 2045	-1.635
	[-0.297]
judge id 2047	-0.675
	[-0.132]
judge id 2048	-1.034
	[-0.219]
judge id 2049	0.270
	[0.052]
judge id 2050	-0.881
	[-0.179]
judge id 2051	-1.514
	[-0.305]
judge id 2052	-1.555
	[-0.354]
judge id 2053	-1.047
	[-0.214]
judge id 2054	-0.873
	[-0.180]
judge id 2055	-0.016
	[-0.003]
judge id 2056	-1.820
	[-0.352]
judge id 2057	-1.193
	[-0.225]
judge id 2058	-0.546
	[-0.105]
judge id 2059	0.061
	[0.013]
judge id 2060	-2.233
	[-0.510]

judge id 2061	-1.126
	[-0.241]
judge id 2062	-1.871
	[-0.424]
judge id 2063	-2.248
	[-0.547]
judge id 2065	-1.804
	[-0.401]
judge id 2066	-0.989
	[-0.198]
judge id 2067	-0.648
	[-0.127]
judge id 2068	-0.709
	[-0.143]
judge id 2069	-1.314
	[-0.293]
judge id 2070	-1.420
	[-0.305]
judge id 2071	-2.054
	[-0.454]
judge id 2072	-6.244
	[-1.101]
judge id 2073	-1.501
	[-0.299]
judge id 2074	-1.427
	[-0.320]
judge id 2075	-5.677
	[-0.977]
judge id 2076	-2.128
	[-0.430]
judge id 2077	-0.723
	[-0.155]
judge id 2078	0.005
	[0.001]
judge id 2079	1.030
	[0.208]
judge id 2080	-2.510
	[-0.562]
judge id 2081	1.060
	[0.198]
judge id 2083	0.558
	[0.103]
judge id 2084	2.121

	[0.468]
judge id 2085	-0.903
	[-0.187]
judge id 2086	-1.720
	[-0.365]
judge id 2087	-1.996
	[-0.362]
judge id 2088	0.366
	[0.070]
judge id 2089	-0.948
	[-0.200]
judge id 2090	-0.194
	[-0.038]
judge id 2091	-2.135
	[-0.466]
judge id 2092	-0.408
	[-0.080]
judge id 2093	0.304
	[0.060]
judge id 2094	-1.170
	[-0.249]
judge id 2095	-1.627
	[-0.329]
judge id 2096	0.997
	[0.184]
judge id 2097	-0.894
	[-0.182]
judge id 2098	-0.658
	[-0.140]
judge id 2099	-0.330
	[-0.064]
judge id 2100	-1.128
	[-0.210]
judge id 2101	-0.270
	[-0.054]
judge id 2102	0.091
	[0.017]
judge id 2103	-1.294
	[-0.263]
judge id 2104	-1.049
	[-0.226]
judge id 2105	0.286
	[0.054]

judge id 2107	-0.464
	[-0.102]
judge id 2108	-1.492
	[-0.273]
judge id 2110	0.943
	[0.186]
judge id 2111	-0.622
	[-0.130]
judge id 2112	-1.239
	[-0.246]
judge id 2113	-0.604
	[-0.128]
judge id 2114	-1.769
	[-0.394]
judge id 2115	-1.737
	[-0.360]
judge id 2116	-2.202
	[-0.493]
judge id 2118	0.544
	[0.103]
judge id 2119	-2.180
	[-0.473]
judge id 2120	2.365
	[0.447]
judge id 2121	-3.243
	[-0.699]
judge id 2122	-2.317
	[-0.553]
judge id 2123	0.409
	[0.075]
judge id 2124	-1.143
	[-0.216]
judge id 2125	4.548
	[0.882]
judge id 2126	0.586
	[0.113]
judge id 2127	2.758
	[0.513]
judge id 2128	4.102
	[0.818]
judge id 2129	-1.297
	[-0.256]
judge id 2130	-0.466

	[-0.087]
judge id 2131	-1.601
	[-0.357]
judge id 2132	-1.350
	[-0.296]
judge id 2133	-0.764
	[-0.164]
judge id 2134	1.988
	[0.369]
judge id 2135	-0.289
	[-0.056]
judge id 2136	-2.796
	[-0.597]
judge id 2137	3.999
	[0.754]
judge id 2138	-1.096
	[-0.225]
judge id 2139	-2.057
	[-0.454]
judge id 2140	0.712
	[0.147]
judge id 2142	-0.898
	[-0.190]
judge id 2143	-1.343
	[-0.264]
judge id 2144	-1.695
	[-0.358]
judge id 2145	-1.683
	[-0.350]
judge id 2146	-0.672
	[-0.131]
judge id 2147	-1.268
	[-0.247]
judge id 2148	-1.514
	[-0.321]
judge id 2149	-1.780
	[-0.397]
judge id 2150	-1.719
	[-0.370]
judge id 2151	0.129
	[0.024]
judge id 2152	-1.159
	[-0.219]

judge id 2153	-2.530
	[-0.510]
judge id 2154	-0.583
	[-0.116]
judge id 2155	-1.663
	[-0.359]
judge id 2156	-0.654
	[-0.139]
judge id 2157	-1.500
	[-0.313]
judge id 2160	-0.084
	[-0.017]
judge id 2161	-0.916
	[-0.189]
judge id 2162	-2.501
	[-0.570]
judge id 2163	0.172
	[0.033]
judge id 2164	-1.572
	[-0.343]
judge id 2165	-2.317
	[-0.527]
judge id 2166	-0.805
	[-0.152]
judge id 2167	-2.491
	[-0.473]
judge id 2168	-2.763
	[-0.650]
judge id 2169	-1.465
	[-0.337]
judge id 2170	-2.058
	[-0.456]
judge id 2171	-1.315
	[-0.249]
judge id 2172	-0.082
	[-0.017]
judge id 2173	-1.856
	[-0.432]
judge id 2174	-1.330
	[-0.284]
judge id 2176	0.407
	[0.082]
judge id 2177	-0.730

	[-0.150]
judge id 2179	-1.164
	[-0.246]
judge id 2180	-1.223
	[-0.273]
judge id 2181	-1.711
	[-0.309]
judge id 2182	-0.360
	[-0.081]
judge id 2183	-0.149
	[-0.028]
judge id 2184	-0.443
	[-0.086]
judge id 2185	-0.092
	[-0.019]
judge id 2186	-2.143
	[-0.443]
judge id 2187	0.235
	[0.047]
judge id 2188	-0.217
	[-0.046]
judge id 2189	1.271
	[0.236]
judge id 2190	-1.331
	[-0.286]
judge id 2191	-1.467
	[-0.297]
judge id 2193	-1.731
	[-0.365]
judge id 2194	2.424
	[0.469]
judge id 2195	-0.103
	[-0.021]
judge id 2196	-0.081
	[-0.018]
judge id 2198	-1.727
	[-0.379]
judge id 2200	-1.385
	[-0.322]
judge id 2201	-2.153
	[-0.481]
judge id 2202	-2.383
	[-0.467]

judge id 2203	-0.960
	[-0.200]
judge id 2204	-1.404
	[-0.257]
judge id 2205	-1.880
	[-0.422]
judge id 2206	-2.635
	[-0.576]
judge id 2207	-1.778
	[-0.385]
judge id 2208	-3.613
	[-0.792]
judge id 2209	-1.021
	[-0.217]
judge id 2210	-0.085
	[-0.017]
judge id 2211	-1.556
	[-0.342]
judge id 2212	-1.477
	[-0.343]
judge id 2214	-1.707
	[-0.368]
judge id 2215	-0.941
	[-0.207]
judge id 2216	-1.085
	[-0.230]
judge id 2217	0.788
	[0.153]
judge id 2218	0.720
	[0.143]
judge id 2219	-0.746
	[-0.141]
judge id 2220	-1.739
	[-0.354]
judge id 2221	-1.493
	[-0.327]
judge id 2222	-1.757
	[-0.383]
judge id 2223	-0.830
	[-0.192]
judge id 2224	1.609
	[0.298]
judge id 2225	-0.454

		[-0.087]	
judge id 2226		-1.238	
		[-0.254]	
judge id 2227		-0.597	
		[-0.129]	
judge id 2228		-1.599	
		[-0.327]	
judge id 2229		-1.207	
		[-0.250]	
judge id 2231		0.317	
		[0.060]	
judge id 2232		-2.234	
		[-0.453]	
judge id 2233		-0.596	
		[-0.119]	
judge id 2234		-3.138	
		[-0.709]	
judge id 2235		-1.095	
		[-0.222]	
judge id 2236		-2.366	
		[-0.477]	
judge id 2237		-1.106	
		[-0.240]	
judge id 2238		-1.194	
		[-0.267]	
judge id 2240		-0.923	
		[-0.197]	
judge id 2241		-1.774	
		[-0.389]	
judge id 2244		-0.660	
		[-0.129]	
judge id 2245		-2.161	
		[-0.384]	
Pseudo R^2	0.028	.	.
Wald Chi^2	688	.	547
rho			0.049

Table 8. Estimation of Reversal Rate

Estimation of the frequency of *warning* signals. Models 1 and 2 are weighted least squares estimations, analytic weights being the number of the judge's opinions for the year (with robust standard errors adjusted for 210 and 197 clusters (judge id), respectively). Models 3 - 5 are ordinary least squares estimations (with robust standard errors adjusted for 210, 197 and 109 clusters (judge id), respectively). Models 6 and 7 are generalized linear models with a logit link (with analytic weights comprising the number of the judge's opinions for the year robust standard errors adjusted for 210 and 197 clusters (judge id), respectively). Omitted are judges whose *warning rate* does not vary over year periods (eliminating 20 judge year-periods from Model 1 to Model 2; eliminating 20 judge year-periods from Model 3 to Model 4 and 23 judge year-periods from Model 3 to Model 5; eliminating 20 judge year-periods from Model 6 to Model 7). *t*-statistics in brackets below parameter estimates. Significance at 1%, 5% and 10% levels indicated with ***, ** and *, respectively.

	Weighted Least Squares		Ordinary Least Squares			Generalized Linear Model with Logit Link (Analytic Weights)	
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Opinions in Year at Least:	1	5	1	5	20	1	5
No. Obs.	1202	1045	1202	1045	500	1202	1045
ave yale	0.065**	0.066**	0.026	0.022	0.067*	0.987**	1.003**
	[2.057]	[2.067]	[0.579]	[0.502]	[1.705]	[2.409]	[2.483]
ave stanford	-0.007	-0.008	-0.016	-0.049	0.068	-0.097	-0.095
	[-0.166]	[-0.196]	[-0.294]	[-0.840]	[1.224]	[-0.178]	[-0.177]
ave harvard	0.007	0.007	0.027	0.017	-0.000	0.106	0.134
	[0.342]	[0.372]	[0.890]	[0.586]	[-0.008]	[0.364]	[0.463]
ave nyu	0.027	0.029	0.050	0.043	0.020	0.500*	0.535**
	[1.522]	[1.648]	[1.237]	[1.147]	[0.748]	[1.891]	[2.081]
ave columbia	0.015	0.015	0.016	-0.001	0.003	0.278	0.275
	[0.406]	[0.384]	[0.367]	[-0.020]	[0.067]	[0.511]	[0.505]
ave chicago	-0.011	-0.011	-0.078	-0.096	0.043	-0.284	-0.252
	[-0.242]	[-0.239]	[-1.022]	[-1.225]	[0.515]	[-0.329]	[-0.297]
ave michigan	-0.021	-0.023	0.027	-0.044	0.007	-0.300	-0.327
	[-0.724]	[-0.798]	[0.338]	[-1.206]	[0.202]	[-0.753]	[-0.839]
ave berkeley	0.076*	0.076*	0.090	0.060	0.062	1.104**	1.114**
	[1.821]	[1.793]	[0.986]	[0.802]	[1.214]	[2.148]	[2.102]
ave virginia	0.007	0.010	-0.046	-0.032	0.024	-0.008	0.040
	[0.221]	[0.267]	[-0.839]	[-0.530]	[0.418]	[-0.017]	[0.080]
ave cornell	0.081**	0.073*	0.137*	0.083	0.019	1.274**	1.134**
	[2.013]	[1.741]	[1.930]	[1.381]	[0.390]	[2.240]	[1.985]
ave duke	-0.050	-0.057	-0.049	-0.093	-0.003	-0.584	-0.706
	[-1.007]	[-1.137]	[-0.614]	[-1.559]	[-0.052]	[-1.080]	[-1.269]
ave northwestern	0.055	0.057	0.059	0.050	0.154	1.130*	1.223**
	[1.108]	[1.168]	[0.559]	[0.523]	[1.587]	[1.762]	[2.017]
ave pennsylvania	0.041	0.040	0.044	0.040	0.050	0.708	0.736
	[0.990]	[0.958]	[0.868]	[0.866]	[0.741]	[1.316]	[1.382]
ave georgetown	-0.011	-0.015	0.020	-0.020	-0.019	-0.224	-0.247

	[-0.309]	[-0.412]	[0.351]	[-0.406]	[-0.407]	[-0.480]	[-0.522]
ave texas	-0.017	-0.017	-0.018	-0.046	0.039	-0.506	-0.460
	[-0.392]	[-0.388]	[-0.184]	[-0.492]	[0.450]	[-0.750]	[-0.693]
ave ucla	-0.023	-0.034	0.061	0.014	-0.038	0.126	0.064
	[-0.353]	[-0.470]	[0.851]	[0.171]	[-0.471]	[0.160]	[0.075]
ave usc	-0.142*	-0.146*	-0.151*	-0.200*	-0.102	-2.000**	-2.060**
	[-1.879]	[-1.747]	[-1.679]	[-1.904]	[-1.372]	[-2.193]	[-2.066]
ave vanderbilt	-0.099	-0.163*	0.003	-0.165*	-0.106	-1.038	-1.804*
	[-0.987]	[-1.706]	[0.026]	[-1.656]	[-0.534]	[-1.007]	[-1.684]
req bar x ave yale	-0.042	-0.043	0.049	0.057	-0.080	-0.630	-0.601
	[-0.811]	[-0.811]	[0.649]	[0.760]	[-0.548]	[-1.025]	[-0.981]
req bar x ave stanford	-0.006	0.009	0.029	0.111	-0.158	-0.127	0.070
	[-0.107]	[0.142]	[0.328]	[1.126]	[-1.653]	[-0.169]	[0.092]
req bar x ave harvard	-0.051*	-0.050	-0.127**	-0.106*	-0.053	-0.756*	-0.783*
	[-1.699]	[-1.632]	[-2.271]	[-1.842]	[-1.007]	[-1.837]	[-1.868]
req bar x ave nyu	-0.022	-0.021	-0.076	-0.076	0.040	-0.511	-0.508
	[-0.491]	[-0.466]	[-1.004]	[-1.091]	[0.560]	[-0.827]	[-0.831]
req bar x ave columbia	0.005	0.009	0.032	0.050	0.061	-0.057	-0.016
	[0.101]	[0.161]	[0.498]	[0.802]	[0.952]	[-0.075]	[-0.020]
req bar x ave chicago	-0.022	-0.023	0.085	0.067	-0.096	-0.205	-0.252
	[-0.351]	[-0.353]	[0.912]	[0.611]	[-1.009]	[-0.199]	[-0.243]
req bar x ave michigan	0.038	0.041	-0.025	0.031	0.014	0.572	0.607
	[0.902]	[0.982]	[-0.268]	[0.567]	[0.248]	[1.027]	[1.114]
req bar x ave berkeley	0.023	0.044	-0.028	0.077	0.048	0.109	0.738
	[0.329]	[0.605]	[-0.169]	[0.677]	[0.489]	[0.125]	[0.903]
req bar x ave virginia	0.003	-0.015	0.164	0.071	-0.107	0.067	-0.285
	[0.037]	[-0.209]	[1.432]	[0.766]	[-1.047]	[0.079]	[-0.331]
req bar x ave cornell	0.004	0.017	-0.023	0.054	0.103	0.250	0.496
	[0.056]	[0.210]	[-0.255]	[0.638]	[1.022]	[0.250]	[0.479]
req bar x ave duke	0.144*	0.156*	0.135	0.201**	0.071	1.782**	2.012**
	[1.894]	[1.944]	[1.265]	[1.979]	[0.680]	[2.069]	[2.211]
req bar x ave northwestern	-0.067	-0.063	-0.148	-0.124	-0.134	-1.011	-1.030
	[-0.990]	[-0.951]	[-1.074]	[-1.046]	[-1.218]	[-1.158]	[-1.224]
req bar x ave pennsylvania	-0.046	-0.023	-0.057	0.030	-0.112	-0.606	-0.249
	[-0.648]	[-0.315]	[-0.507]	[0.312]	[-1.147]	[-0.521]	[-0.207]
req bar x ave georgetown	0.015	0.022	-0.003	0.051	0.026	0.301	0.394
	[0.254]	[0.353]	[-0.035]	[0.592]	[0.432]	[0.388]	[0.501]
req bar x ave texas	0.020	-0.002	0.021	-0.024	-0.002	0.548	0.189
	[0.285]	[-0.028]	[0.145]	[-0.174]	[-0.014]	[0.549]	[0.191]
req bar x ave ucla	-0.024	-0.010	-0.091	-0.040	0.041	-0.870	-0.828
	[-0.260]	[-0.097]	[-0.923]	[-0.331]	[0.230]	[-0.751]	[-0.678]
req bar x ave usc	0.055	0.011	0.185	0.050	-0.117	1.691	0.921
	[0.547]	[0.124]	[1.132]	[0.415]	[-1.138]	[1.416]	[0.835]
req bar x ave vanderbilt	0.122	0.178	0.071	0.205	0.069	1.235	2.017*
	[0.963]	[1.405]	[0.364]	[1.066]	[0.264]	[1.033]	[1.661]
ave administrative law	-0.006	-0.006	-0.003	-0.006	-0.038*	-0.071	-0.066
	[-0.907]	[-0.738]	[-0.318]	[-0.561]	[-1.667]	[-0.811]	[-0.687]
ave admiralty law	0.011	0.011	0.013	0.009	0.016	0.171*	0.169
	[1.414]	[1.174]	[1.525]	[0.994]	[0.655]	[1.783]	[1.577]
ave antitrust and trade law	0.014**	0.015**	0.008	0.009	-0.005	0.158**	0.189**

	[2.090]	[2.028]	[0.989]	[1.164]	[-0.260]	[2.462]	[2.530]
ave banking law	0.007	0.007	0.009	0.009*	0.003	0.072*	0.078*
	[1.208]	[1.324]	[1.550]	[1.748]	[0.214]	[1.857]	[1.879]
ave bankruptcy law	0.006	0.006	0.006	0.007	0.010	0.059	0.078
	[1.012]	[0.966]	[1.017]	[1.256]	[0.550]	[1.228]	[1.339]
ave business and corporate law	0.004	0.006	-0.017*	-0.012	0.032	0.026	0.050
	[0.321]	[0.444]	[-1.918]	[-1.065]	[1.317]	[0.174]	[0.306]
ave civil procedure	-0.000	-0.000	-0.001	0.000	-0.002	-0.007	-0.001
	[-0.208]	[-0.001]	[-0.628]	[0.002]	[-0.512]	[-0.395]	[-0.050]
ave civil rights law	-0.006	-0.008	-0.011*	-0.007	-0.012	-0.081	-0.093
	[-1.253]	[-1.436]	[-1.735]	[-1.171]	[-1.102]	[-1.298]	[-1.410]
ave commercial law ucc	-0.012	-0.008	-0.030**	-0.017	-0.003	-0.259	-0.226
	[-0.780]	[-0.526]	[-2.081]	[-0.912]	[-0.109]	[-1.279]	[-1.052]
ave communications law	0.020	0.020	0.024**	0.023*	-0.003	0.153**	0.154**
	[1.505]	[1.358]	[2.209]	[1.906]	[-0.098]	[2.224]	[2.059]
ave computer and internet law	0.006	0.007	0.010	0.023	0.001	0.086	0.130
	[0.341]	[0.417]	[0.579]	[1.412]	[0.051]	[0.514]	[0.746]
ave constitutional law	0.015***	0.014***	0.018**	0.013**	0.005	0.158***	0.162***
	[3.077]	[2.698]	[2.383]	[2.242]	[0.578]	[3.515]	[3.511]
ave contracts law	0.002	0.002	0.009	0.014*	-0.010	0.040	0.038
	[0.263]	[0.195]	[1.281]	[1.701]	[-0.599]	[0.511]	[0.450]
ave copyright law	-0.006	-0.005	-0.009	-0.005	-0.013	-0.056	-0.053
	[-0.624]	[-0.473]	[-0.788]	[-0.444]	[-0.889]	[-0.624]	[-0.597]
ave criminal law and procedure	-0.001	-0.001	0.000	-0.001	0.001	-0.005	-0.003
	[-0.585]	[-0.385]	[0.069]	[-0.368]	[0.432]	[-0.274]	[-0.130]
ave education law	-0.005	-0.003	-0.012	-0.010	0.015	-0.069	-0.041
	[-0.777]	[-0.421]	[-1.545]	[-1.325]	[0.759]	[-0.750]	[-0.394]
ave energy and utilities law	0.014	0.020	0.009	0.017	0.023	0.117	0.178
	[0.949]	[1.300]	[0.531]	[0.945]	[0.738]	[0.859]	[1.257]
ave environmental law	0.007*	0.006	0.011	0.004	0.028***	0.074*	0.058
	[1.705]	[1.457]	[1.633]	[1.190]	[2.677]	[1.955]	[1.636]
ave estate gift and trust law	-0.007	-0.015	-0.009	-0.019	-0.011	-0.116	-0.185
	[-0.268]	[-0.458]	[-0.280]	[-0.466]	[-0.283]	[-0.406]	[-0.529]
ave evidence	-0.002	-0.001	-0.010	-0.007	-0.002	-0.023	-0.017
	[-0.234]	[-0.100]	[-1.177]	[-0.965]	[-0.136]	[-0.304]	[-0.217]
ave family law	0.011	0.036*	0.003	0.044**	0.026	0.061	0.242
	[0.499]	[1.702]	[0.118]	[2.321]	[0.453]	[0.427]	[1.106]
ave governments	-0.002	0.001	-0.007	0.003	0.018	-0.009	0.021
	[-0.472]	[0.129]	[-1.190]	[0.647]	[1.498]	[-0.229]	[0.483]
ave healthcare law	-0.011	-0.011	-0.024	-0.023	-0.006	-0.171	-0.205
	[-0.732]	[-0.806]	[-1.101]	[-1.392]	[-0.261]	[-0.889]	[-1.073]
ave immigration law	-0.013	-0.012	-0.023**	-0.014	-0.019	-0.152	-0.139
	[-1.440]	[-1.269]	[-2.217]	[-1.234]	[-1.230]	[-1.242]	[-1.085]
ave insurance law	-0.000	-0.003	0.002	-0.008	0.007	-0.018	-0.062
	[-0.045]	[-0.279]	[0.204]	[-0.871]	[0.435]	[-0.189]	[-0.600]
ave international law	0.025	0.015	0.034	0.026*	-0.021	0.214*	0.148
	[1.539]	[0.888]	[1.438]	[1.803]	[-0.736]	[1.921]	[0.774]
ave international trade law	-0.002	0.007	-0.025	0.007	0.060	0.140	0.200
	[-0.084]	[0.263]	[-0.943]	[0.262]	[0.922]	[0.496]	[0.610]
ave labor and employment law	-0.005**	-0.005**	-0.006**	-0.007**	-0.006*	-0.087***	-0.090***

	[-2.262]	[-2.019]	[-2.489]	[-2.175]	[-1.738]	[-2.815]	[-2.661]
ave legal ethics	0.004	-0.004	-0.004	-0.013	0.029	0.018	-0.053
	[0.220]	[-0.219]	[-0.184]	[-0.673]	[0.596]	[0.102]	[-0.285]
ave military and veterans law	-0.051	-0.038	-0.117**	-0.079*	-0.095	-0.480	-0.326
	[-1.046]	[-0.745]	[-2.047]	[-1.861]	[-0.754]	[-0.823]	[-0.563]
ave patent law	0.002	0.003	0.003	0.002	0.004	0.023	0.030
	[0.591]	[0.558]	[0.675]	[0.319]	[0.441]	[0.601]	[0.515]
ave pensions and benefits law	-0.000	0.000	-0.008	-0.006	0.003	-0.022	-0.028
	[-0.057]	[0.012]	[-1.448]	[-0.922]	[0.340]	[-0.345]	[-0.396]
ave public contracts law	-0.009	-0.010	0.014	-0.002	-0.075	-0.203	-0.228
	[-0.316]	[-0.344]	[0.428]	[-0.065]	[-1.328]	[-0.570]	[-0.597]
ave public health & welfare law	0.014*	0.009	0.035**	0.012	0.008	0.204**	0.137
	[1.677]	[1.208]	[1.990]	[1.344]	[0.412]	[2.119]	[1.406]
ave real property law	-0.013	-0.013	-0.020	-0.017	-0.046	-0.112	-0.117
	[-0.926]	[-0.862]	[-1.515]	[-1.351]	[-1.348]	[-0.905]	[-0.904]
ave securities law	0.002	0.000	0.003	0.001	0.000	0.015	-0.000
	[0.394]	[0.054]	[0.703]	[0.307]	[0.009]	[0.368]	[-0.008]
ave tax law	0.013*	0.013	0.008	0.005	0.025	0.132**	0.160*
	[1.657]	[1.280]	[0.692]	[0.564]	[0.996]	[2.425]	[1.818]
ave torts	-0.002	-0.001	-0.007	-0.003	-0.003	-0.027	-0.009
	[-0.478]	[-0.194]	[-1.513]	[-0.520]	[-0.281]	[-0.526]	[-0.162]
ave trade secrets law	-0.000	0.005	-0.014	-0.005	-0.065	-0.031	0.046
	[-0.007]	[0.273]	[-0.807]	[-0.315]	[-1.511]	[-0.164]	[0.233]
ave trademark law	-0.003	-0.003	-0.002	0.000	-0.012	-0.042	-0.037
	[-0.787]	[-0.689]	[-0.394]	[0.045]	[-1.411]	[-0.935]	[-0.808]
ave transportation law	-0.001	-0.002	0.007	0.006	-0.003	-0.050	-0.062
	[-0.082]	[-0.083]	[0.606]	[0.266]	[-0.077]	[-0.343]	[-0.327]
ave workers compensation & ssdi	-0.018	-0.014	-0.039**	-0.017	-0.005	-0.268*	-0.208
	[-1.493]	[-1.142]	[-2.271]	[-1.358]	[-0.216]	[-1.795]	[-1.359]
jcs x G.H.W.B.	-0.149*	-0.134	-0.228**	-0.176*	-0.075	-2.484**	-2.207**
	[-1.820]	[-1.603]	[-2.108]	[-1.662]	[-0.800]	[-2.307]	[-2.012]
jcs x G.R.F.	0.658*	0.689*	0.483	0.611	0.928**	11.511***	11.833***
	[1.681]	[1.700]	[1.008]	[1.170]	[2.382]	[2.816]	[2.837]
jcs x J.C.	0.206**	0.215**	0.104	0.255***	0.124	2.948***	2.896***
	[2.311]	[2.426]	[0.682]	[2.679]	[0.995]	[3.605]	[3.761]
jcs x L.B.J.	-0.432	-0.464	-0.654*	-0.909***	0.375	-12.251***	-12.757***
	[-1.308]	[-1.412]	[-1.915]	[-3.733]	[0.685]	[-4.031]	[-4.279]
jcs x R.M.N.	0.124	0.009	0.467	0.084	-0.088	2.929	0.567
	[0.437]	[0.041]	[0.994]	[0.292]	[-0.341]	[0.590]	[0.141]
jcs x R.R.	0.000	-0.019	0.131	0.014	-0.037	0.105	-0.201
	[0.003]	[-0.345]	[1.161]	[0.189]	[-0.511]	[0.141]	[-0.265]
jcs x W.J.C.	0.146	0.162	-0.033	-0.029	0.143	1.462	1.662
	[1.359]	[1.453]	[-0.250]	[-0.232]	[0.719]	[1.240]	[1.373]
age	0.001	0.001	-0.004	-0.002	0.004	0.037	0.027
	[0.086]	[0.049]	[-0.283]	[-0.129]	[0.287]	[0.233]	[0.173]
age squared	-0.000	-0.000	0.000	-0.000	-0.000	-0.001	-0.000
	[-0.280]	[-0.269]	[0.121]	[-0.197]	[-0.431]	[-0.427]	[-0.399]
judge id 2001	0.244	0.285	0.427	0.453		-1.181	-0.841
	[0.733]	[0.827]	[0.929]	[1.054]		[-0.231]	[-0.163]
judge id 2003	0.191	0.172	0.407	0.329		-2.731	-2.254

	[0.563]	[0.489]	[0.872]	[0.739]		[-0.528]	[-0.427]
judge id 2004	0.288	0.315	0.424	0.464		-1.101	-0.588
	[0.864]	[0.911]	[0.944]	[1.079]		[-0.216]	[-0.114]
judge id 2005	0.034	0.059	0.155	0.170	-0.049	-5.161	-4.661
	[0.104]	[0.172]	[0.341]	[0.395]	[-0.112]	[-1.014]	[-0.907]
judge id 2006	0.241	0.279	0.464	0.613	-0.119	0.429	1.138
	[0.701]	[0.785]	[1.018]	[1.399]	[-0.256]	[0.085]	[0.221]
judge id 2007	0.092	0.120	0.301	0.306		-2.786	-2.327
	[0.269]	[0.339]	[0.655]	[0.692]		[-0.534]	[-0.440]
judge id 2008	0.008	0.032	0.167	0.149		-4.331	-3.820
	[0.025]	[0.093]	[0.368]	[0.343]		[-0.850]	[-0.742]
judge id 2009	-0.025		0.143			-4.898	
	[-0.077]		[0.321]			[-0.975]	
judge id 2010	0.135	0.148	0.311	0.258		-2.562	-2.283
	[0.429]	[0.456]	[0.691]	[0.600]		[-0.527]	[-0.465]
judge id 2011	0.403	0.413	0.535	0.525		-1.047	-0.802
	[1.185]	[1.172]	[1.181]	[1.215]		[-0.201]	[-0.153]
judge id 2012	0.153	0.171	0.390	0.353		-2.398	-2.285
	[0.457]	[0.491]	[0.837]	[0.790]		[-0.466]	[-0.438]
judge id 2013	0.101		0.345			-2.677	
	[0.303]		[0.743]			[-0.513]	
judge id 2014	0.229	0.152	0.462	0.292		-1.902	-2.247
	[0.680]	[0.428]	[1.000]	[0.652]		[-0.365]	[-0.420]
judge id 2015	0.135	0.151	0.315	0.295		-2.812	-2.455
	[0.403]	[0.435]	[0.682]	[0.671]		[-0.542]	[-0.469]
judge id 2016	0.153	0.169	0.276	0.260		-2.396	-2.105
	[0.468]	[0.501]	[0.592]	[0.583]		[-0.472]	[-0.411]
judge id 2019	0.403		0.537			-0.764	
	[1.183]		[1.150]			[-0.146]	
judge id 2020	0.094	0.115	0.243	0.249	0.025	-3.085	-2.657
	[0.278]	[0.329]	[0.530]	[0.563]	[0.054]	[-0.595]	[-0.507]
judge id 2022	0.022	0.037	0.171	0.153		-4.015	-3.694
	[0.072]	[0.118]	[0.403]	[0.378]		[-0.847]	[-0.772]
judge id 2023	0.075	0.114	0.226	0.277		-3.519	-2.960
	[0.225]	[0.330]	[0.496]	[0.630]		[-0.685]	[-0.570]
judge id 2024	0.078	0.081	0.211	0.178		-3.496	-3.233
	[0.241]	[0.243]	[0.475]	[0.420]		[-0.698]	[-0.640]
judge id 2025	0.149	0.165	0.317	0.340	0.021	-2.168	-1.847
	[0.450]	[0.481]	[0.697]	[0.774]	[0.048]	[-0.425]	[-0.358]
judge id 2027	0.038	0.053	0.182	0.152	-0.019	-3.827	-3.490
	[0.115]	[0.157]	[0.402]	[0.351]	[-0.043]	[-0.756]	[-0.683]
judge id 2028	0.081	0.089	0.261	0.212		-3.456	-3.199
	[0.253]	[0.268]	[0.590]	[0.501]		[-0.695]	[-0.638]
judge id 2029	0.048	0.057	0.221	0.160		-3.682	-3.483
	[0.144]	[0.166]	[0.482]	[0.365]		[-0.719]	[-0.674]
judge id 2030	0.096	0.117	0.208	0.200	-0.009	-3.182	-2.777
	[0.311]	[0.365]	[0.465]	[0.470]	[-0.020]	[-0.656]	[-0.567]
judge id 2032	0.086	0.100	0.272	0.223		-2.754	-2.464
	[0.253]	[0.285]	[0.587]	[0.499]		[-0.524]	[-0.464]
judge id 2033	0.128	0.150	0.244	0.213		-2.557	-2.170

	[0.389]	[0.439]	[0.528]	[0.482]		[-0.502]	[-0.421]
judge id 2035	0.113	0.124	0.345	0.288	0.027	-2.658	-2.389
	[0.331]	[0.349]	[0.744]	[0.641]	[0.061]	[-0.507]	[-0.448]
judge id 2036	0.047	0.063	0.172	0.118		-3.977	-3.673
	[0.160]	[0.205]	[0.401]	[0.289]		[-0.859]	[-0.788]
judge id 2037	0.138	0.146	0.334	0.304	0.040	-2.627	-2.378
	[0.428]	[0.437]	[0.748]	[0.716]	[0.090]	[-0.526]	[-0.471]
judge id 2038	0.093	0.108	0.315	0.284	0.032	-2.971	-2.619
	[0.278]	[0.311]	[0.687]	[0.646]	[0.073]	[-0.577]	[-0.502]
judge id 2039	0.109	0.117	0.304	0.237		-2.604	-2.375
	[0.349]	[0.362]	[0.699]	[0.583]		[-0.540]	[-0.488]
judge id 2040	0.075	0.077	0.297	0.264		-2.994	-2.794
	[0.233]	[0.230]	[0.712]	[0.664]		[-0.611]	[-0.566]
judge id 2041	0.060	0.080	0.251	0.235		-3.400	-2.939
	[0.176]	[0.229]	[0.540]	[0.530]		[-0.653]	[-0.563]
judge id 2042	0.137	0.151	0.346	0.346		-2.320	-1.994
	[0.408]	[0.432]	[0.765]	[0.800]		[-0.451]	[-0.383]
judge id 2045	0.097	0.160	0.182	0.308		-3.280	-2.074
	[0.272]	[0.439]	[0.371]	[0.668]		[-0.578]	[-0.371]
judge id 2047	0.110	0.124	0.303	0.279	-0.024	-2.984	-2.706
	[0.321]	[0.347]	[0.651]	[0.618]	[-0.057]	[-0.571]	[-0.511]
judge id 2048	0.147	0.163	0.352	0.335		-2.401	-2.042
	[0.449]	[0.478]	[0.772]	[0.780]		[-0.477]	[-0.402]
judge id 2049	0.178	0.200	0.341	0.358	0.114	-1.830	-1.380
	[0.531]	[0.576]	[0.751]	[0.820]	[0.263]	[-0.357]	[-0.265]
judge id 2050	0.136	0.132	0.338	0.289		-2.356	-2.358
	[0.405]	[0.376]	[0.734]	[0.653]		[-0.457]	[-0.451]
judge id 2051	0.091	0.113	0.261	0.274	0.006	-3.059	-2.603
	[0.272]	[0.325]	[0.568]	[0.627]	[0.015]	[-0.597]	[-0.502]
judge id 2052	0.129	0.147	0.313	0.293	0.037	-2.403	-2.049
	[0.416]	[0.459]	[0.716]	[0.706]	[0.087]	[-0.504]	[-0.428]
judge id 2053	0.119	0.139	0.297	0.301	0.037	-2.615	-2.183
	[0.360]	[0.405]	[0.649]	[0.692]	[0.086]	[-0.513]	[-0.424]
judge id 2054	0.145	0.163	0.332	0.324	0.078	-2.187	-1.770
	[0.438]	[0.474]	[0.727]	[0.746]	[0.179]	[-0.429]	[-0.344]
judge id 2055	0.161	0.177	0.350	0.329	0.063	-1.892	-1.551
	[0.478]	[0.506]	[0.762]	[0.750]	[0.144]	[-0.366]	[-0.296]
judge id 2056	0.025	0.041	0.232	0.196	-0.067	-4.202	-3.807
	[0.073]	[0.117]	[0.503]	[0.444]	[-0.152]	[-0.810]	[-0.724]
judge id 2057	0.042	0.064	0.257	0.261	-0.091	-3.809	-3.366
	[0.127]	[0.185]	[0.569]	[0.597]	[-0.208]	[-0.753]	[-0.656]
judge id 2058	0.115	0.137	0.286	0.313	0.030	-2.905	-2.449
	[0.344]	[0.394]	[0.632]	[0.720]	[0.071]	[-0.571]	[-0.475]
judge id 2059	0.234	0.229	0.489	0.353		-1.591	-1.311
	[0.698]	[0.660]	[1.069]	[0.808]		[-0.310]	[-0.253]
judge id 2060	0.064	0.085	0.187	0.193		-3.486	-3.040
	[0.205]	[0.264]	[0.429]	[0.475]		[-0.727]	[-0.631]
judge id 2061	0.134	0.152	0.278	0.272	0.074	-2.312	-1.921
	[0.411]	[0.450]	[0.616]	[0.638]	[0.172]	[-0.461]	[-0.380]
judge id 2062	0.091	0.107	0.240	0.244	0.012	-2.965	-2.600

	[0.292]	[0.330]	[0.560]	[0.595]	[0.028]	[-0.617]	[-0.537]
judge id 2063	0.054	0.060	0.279	0.223	-0.003	-3.237	-3.033
	[0.179]	[0.191]	[0.683]	[0.582]	[-0.009]	[-0.699]	[-0.652]
judge id 2065	0.081	0.081	0.262	0.180		-3.078	-3.007
	[0.254]	[0.245]	[0.588]	[0.432]		[-0.624]	[-0.603]
judge id 2066	0.076	0.134	0.192	0.269		-3.220	-2.268
	[0.229]	[0.382]	[0.419]	[0.616]		[-0.625]	[-0.432]
judge id 2067	0.130	0.145	0.341	0.313	0.045	-2.496	-2.175
	[0.385]	[0.412]	[0.740]	[0.706]	[0.104]	[-0.482]	[-0.414]
judge id 2068	0.142		0.351			-2.323	
	[0.419]		[0.766]			[-0.448]	
judge id 2069	0.114	0.136	0.251	0.234		-2.707	-2.343
	[0.361]	[0.414]	[0.565]	[0.554]		[-0.550]	[-0.472]
judge id 2070	0.088	0.102	0.281	0.238	0.015	-3.010	-2.680
	[0.265]	[0.296]	[0.618]	[0.548]	[0.035]	[-0.589]	[-0.519]
judge id 2071	0.066	0.079	0.217	0.193	0.000	-3.498	-3.175
	[0.204]	[0.238]	[0.492]	[0.458]	[0.000]	[-0.706]	[-0.634]
judge id 2072	-0.168	-0.160	0.076	0.028	-0.363	-7.700	-7.402
	[-0.431]	[-0.394]	[0.144]	[0.053]	[-0.720]	[-1.373]	[-1.302]
judge id 2073	0.067	0.094	0.195	0.224		-3.557	-3.017
	[0.200]	[0.272]	[0.427]	[0.519]		[-0.694]	[-0.583]
judge id 2074	0.089	0.096	0.286	0.229	-0.030	-3.137	-2.934
	[0.279]	[0.290]	[0.646]	[0.549]	[-0.071]	[-0.639]	[-0.591]
judge id 2075	-0.145	-0.135	0.089	0.063	-0.339	-7.334	-6.999
	[-0.378]	[-0.336]	[0.175]	[0.125]	[-0.691]	[-1.337]	[-1.256]
judge id 2076	0.069	0.092	0.221	0.223		-3.677	-3.212
	[0.209]	[0.268]	[0.485]	[0.519]		[-0.720]	[-0.623]
judge id 2077	0.116	0.131	0.298	0.281	-0.013	-2.583	-2.267
	[0.356]	[0.386]	[0.662]	[0.657]	[-0.031]	[-0.512]	[-0.444]
judge id 2078	0.149	0.161	0.364	0.337	0.036	-1.933	-1.634
	[0.443]	[0.461]	[0.792]	[0.770]	[0.082]	[-0.374]	[-0.312]
judge id 2079	0.292	0.307	0.457	0.442	0.332	-0.897	-0.584
	[0.864]	[0.874]	[0.993]	[1.002]	[0.758]	[-0.174]	[-0.111]
judge id 2080	0.004	0.013	0.225	0.184	-0.068	-3.935	-3.703
	[0.013]	[0.038]	[0.522]	[0.454]	[-0.163]	[-0.795]	[-0.742]
judge id 2081	0.214	0.242	0.464	0.532	-0.125	0.313	0.849
	[0.619]	[0.675]	[0.992]	[1.196]	[-0.267]	[0.060]	[0.162]
judge id 2083	0.175	0.194	0.394	0.397	0.072	-2.068	-1.632
	[0.532]	[0.569]	[0.900]	[0.934]	[0.170]	[-0.412]	[-0.320]
judge id 2085	0.115	0.125	0.339	0.301	0.013	-2.712	-2.450
	[0.343]	[0.359]	[0.739]	[0.692]	[0.029]	[-0.530]	[-0.473]
judge id 2086	0.038	0.043	0.258	0.200		-3.551	-3.362
	[0.114]	[0.125]	[0.582]	[0.476]		[-0.692]	[-0.648]
judge id 2087	0.043	0.095	0.146	0.267		-4.234	-3.202
	[0.127]	[0.270]	[0.316]	[0.604]		[-0.785]	[-0.595]
judge id 2088	0.170	0.189	0.333	0.359	0.064	-1.758	-1.374
	[0.513]	[0.545]	[0.743]	[0.826]	[0.147]	[-0.345]	[-0.265]
judge id 2089	0.121	0.136	0.280	0.296	-0.030	-2.562	-2.234
	[0.370]	[0.400]	[0.627]	[0.682]	[-0.070]	[-0.508]	[-0.438]
judge id 2090	0.144	0.157	0.338	0.332	0.045	-2.185	-1.861

	[0.427]	[0.448]	[0.740]	[0.748]	[0.104]	[-0.422]	[-0.354]
judge id 2091	0.049	0.062	0.209	0.178	-0.022	-3.735	-3.456
	[0.152]	[0.185]	[0.469]	[0.417]	[-0.051]	[-0.750]	[-0.687]
judge id 2092	0.101	0.093	0.256	0.264		-2.698	-2.945
	[0.300]	[0.262]	[0.565]	[0.597]		[-0.521]	[-0.557]
judge id 2093	0.197	0.221	0.367	0.398	0.119	-1.653	-1.215
	[0.584]	[0.631]	[0.798]	[0.901]	[0.275]	[-0.320]	[-0.232]
judge id 2094	0.107	0.119	0.325	0.269	0.013	-2.650	-2.347
	[0.322]	[0.346]	[0.713]	[0.617]	[0.030]	[-0.519]	[-0.455]
judge id 2095	0.068	0.084	0.262	0.237	-0.007	-3.382	-3.000
	[0.202]	[0.239]	[0.571]	[0.538]	[-0.016]	[-0.655]	[-0.574]
judge id 2096	0.159	0.136	0.447	0.341	0.003	-1.752	-2.299
	[0.485]	[0.401]	[1.017]	[0.805]	[0.007]	[-0.356]	[-0.457]
judge id 2097	0.106	0.123	0.279	0.254	0.063	-2.723	-2.337
	[0.317]	[0.355]	[0.611]	[0.583]	[0.144]	[-0.531]	[-0.450]
judge id 2098	0.144	0.167	0.306	0.305		-2.327	-1.875
	[0.440]	[0.495]	[0.684]	[0.717]		[-0.463]	[-0.370]
judge id 2099	0.147	0.165	0.322	0.321	0.108	-2.174	-1.771
	[0.438]	[0.473]	[0.704]	[0.734]	[0.248]	[-0.423]	[-0.340]
judge id 2100	0.159	0.199	0.295	0.362		-2.206	-1.364
	[0.464]	[0.560]	[0.636]	[0.811]		[-0.409]	[-0.253]
judge id 2101	0.136	0.149	0.340	0.318		-2.223	-1.914
	[0.401]	[0.424]	[0.738]	[0.717]		[-0.426]	[-0.362]
judge id 2102	0.141	0.161	0.320	0.334		-2.236	-1.812
	[0.422]	[0.462]	[0.707]	[0.766]		[-0.435]	[-0.347]
judge id 2103	0.055	0.067	0.251	0.227		-3.455	-3.106
	[0.167]	[0.196]	[0.548]	[0.524]		[-0.678]	[-0.604]
judge id 2104	0.129	0.139	0.336	0.291		-2.459	-2.198
	[0.390]	[0.406]	[0.756]	[0.692]		[-0.486]	[-0.431]
judge id 2105	0.145		0.322			-2.288	
	[0.428]		[0.706]			[-0.441]	
judge id 2107	0.172	0.191	0.281	0.255		-2.092	-1.683
	[0.540]	[0.578]	[0.620]	[0.586]		[-0.421]	[-0.336]
judge id 2108	0.093	0.135	0.226	0.276		-3.204	-2.512
	[0.273]	[0.384]	[0.491]	[0.617]		[-0.598]	[-0.468]
judge id 2110	0.253	0.269	0.407	0.360		-1.286	-0.856
	[0.762]	[0.780]	[0.869]	[0.800]		[-0.249]	[-0.164]
judge id 2111	0.123	0.134	0.344	0.302	0.017	-2.384	-2.127
	[0.367]	[0.386]	[0.751]	[0.694]	[0.040]	[-0.465]	[-0.410]
judge id 2112	0.068		0.268			-3.415	
	[0.200]		[0.581]			[-0.655]	
judge id 2113	0.154	0.197	0.335	0.342		-2.310	-1.791
	[0.460]	[0.567]	[0.733]	[0.790]		[-0.450]	[-0.345]
judge id 2114	0.043	0.055	0.260	0.198		-3.526	-3.298
	[0.135]	[0.168]	[0.591]	[0.482]		[-0.722]	[-0.670]
judge id 2115	0.067	0.080	0.251	0.215	0.013	-3.306	-3.026
	[0.202]	[0.234]	[0.553]	[0.496]	[0.029]	[-0.650]	[-0.589]
judge id 2116	0.074	0.079	0.296	0.221	-0.008	-3.366	-3.168
	[0.232]	[0.241]	[0.673]	[0.532]	[-0.020]	[-0.690]	[-0.644]
judge id 2118	0.187	0.210	0.384	0.383		-1.620	-1.202

	[0.564]	[0.608]	[0.859]	[0.887]		[-0.317]	[-0.232]
judge id 2119	0.028	0.038	0.238	0.211		-3.830	-3.554
	[0.084]	[0.112]	[0.541]	[0.506]		[-0.759]	[-0.697]
judge id 2120	0.278	0.256	0.611	0.475		-0.413	-0.850
	[0.810]	[0.730]	[1.282]	[1.071]		[-0.080]	[-0.163]
judge id 2121	0.001	0.022	0.171	0.142		-4.661	-4.130
	[0.003]	[0.064]	[0.383]	[0.331]		[-0.922]	[-0.810]
judge id 2122	0.082	0.097	0.210	0.166	-0.013	-3.532	-3.221
	[0.276]	[0.315]	[0.480]	[0.398]	[-0.031]	[-0.759]	[-0.686]
judge id 2123	0.166	0.193	0.335	0.428	0.088	-2.016	-1.565
	[0.498]	[0.553]	[0.769]	[1.011]	[0.203]	[-0.392]	[-0.298]
judge id 2124	0.074	0.084	0.307	0.261	-0.034	-3.484	-3.277
	[0.220]	[0.240]	[0.668]	[0.585]	[-0.079]	[-0.674]	[-0.623]
judge id 2125	0.370	0.402	0.507	0.555	0.382	1.779	2.317
	[1.099]	[1.147]	[1.137]	[1.263]	[0.930]	[0.346]	[0.443]
judge id 2126	0.129	0.115	0.398	0.304	-0.043	-2.265	-2.584
	[0.375]	[0.326]	[0.837]	[0.685]	[-0.098]	[-0.436]	[-0.492]
judge id 2127	0.285	0.269	0.552	0.444	0.167	-0.306	-0.668
	[0.826]	[0.765]	[1.171]	[1.012]	[0.380]	[-0.059]	[-0.127]
judge id 2128	0.357	0.386	0.493	0.528	0.350	1.309	1.799
	[1.074]	[1.117]	[1.104]	[1.212]	[0.848]	[0.254]	[0.343]
judge id 2129	0.097	0.108	0.361	0.319	-0.033	-2.854	-2.585
	[0.285]	[0.306]	[0.771]	[0.705]	[-0.073]	[-0.547]	[-0.488]
judge id 2130	0.097	0.112	0.332	0.318	0.010	-2.863	-2.528
	[0.286]	[0.318]	[0.738]	[0.725]	[0.023]	[-0.545]	[-0.472]
judge id 2131	0.111	0.130	0.216	0.181	0.041	-3.021	-2.657
	[0.353]	[0.400]	[0.476]	[0.417]	[0.094]	[-0.617]	[-0.538]
judge id 2132	0.117	0.135	0.246	0.211	0.058	-2.830	-2.458
	[0.369]	[0.412]	[0.539]	[0.483]	[0.132]	[-0.571]	[-0.491]
judge id 2133	0.140	0.162	0.266	0.249	0.053	-2.526	-2.094
	[0.438]	[0.489]	[0.580]	[0.568]	[0.120]	[-0.505]	[-0.413]
judge id 2134	0.205	0.191	0.503	0.402	0.064	-1.000	-1.289
	[0.600]	[0.547]	[1.069]	[0.916]	[0.149]	[-0.194]	[-0.247]
judge id 2135	0.168	0.191	0.312	0.360	0.060	-1.926	-1.554
	[0.508]	[0.553]	[0.688]	[0.821]	[0.137]	[-0.375]	[-0.298]
judge id 2136	0.002	0.018	0.131	0.127		-4.438	-3.990
	[0.006]	[0.053]	[0.292]	[0.293]		[-0.876]	[-0.779]
judge id 2137	0.326	0.360	0.442	0.513	0.342	0.853	1.415
	[0.985]	[1.043]	[1.015]	[1.194]	[0.856]	[0.169]	[0.275]
judge id 2138	0.091	0.109	0.242	0.229	0.037	-2.915	-2.535
	[0.273]	[0.316]	[0.530]	[0.530]	[0.084]	[-0.570]	[-0.491]
judge id 2139	0.037	0.039	0.292	0.220	-0.062	-3.585	-3.410
	[0.112]	[0.116]	[0.668]	[0.534]	[-0.150]	[-0.714]	[-0.674]
judge id 2140	0.242	0.254	0.510	0.445		-1.162	-0.759
	[0.718]	[0.727]	[1.100]	[1.023]		[-0.226]	[-0.146]
judge id 2142	0.138	0.106	0.411	0.275		-2.383	-2.443
	[0.411]	[0.306]	[0.920]	[0.646]		[-0.465]	[-0.473]
judge id 2143	0.069	0.087	0.271	0.257		-3.271	-2.911
	[0.207]	[0.249]	[0.591]	[0.583]		[-0.632]	[-0.556]
judge id 2144	0.065	0.078	0.254	0.213	-0.082	-3.468	-3.174

	[0.198]	[0.230]	[0.562]	[0.493]	[-0.183]	[-0.687]	[-0.622]
judge id 2145	0.075	0.087	0.257	0.231	-0.004	-3.245	-2.938
	[0.227]	[0.255]	[0.569]	[0.531]	[-0.009]	[-0.633]	[-0.567]
judge id 2146	0.108	0.121	0.328	0.287	0.026	-2.754	-2.457
	[0.322]	[0.345]	[0.717]	[0.653]	[0.060]	[-0.531]	[-0.467]
judge id 2147	0.080	0.095	0.279	0.266	-0.021	-3.301	-2.967
	[0.238]	[0.272]	[0.615]	[0.606]	[-0.048]	[-0.636]	[-0.563]
judge id 2148	0.068	0.082	0.259	0.219	-0.012	-3.381	-3.081
	[0.208]	[0.241]	[0.574]	[0.508]	[-0.027]	[-0.670]	[-0.604]
judge id 2149	0.077	0.087	0.256	0.207	0.013	-3.165	-2.882
	[0.242]	[0.265]	[0.585]	[0.498]	[0.032]	[-0.646]	[-0.583]
judge id 2150	0.069	0.084	0.258	0.219	-0.007	-3.334	-3.010
	[0.215]	[0.252]	[0.575]	[0.513]	[-0.016]	[-0.670]	[-0.599]
judge id 2151	0.124	0.146	0.309	0.326	0.024	-2.477	-2.042
	[0.376]	[0.425]	[0.697]	[0.756]	[0.055]	[-0.489]	[-0.397]
judge id 2152	0.093	0.113	0.277	0.279	0.016	-3.438	-3.005
	[0.281]	[0.328]	[0.620]	[0.643]	[0.038]	[-0.674]	[-0.579]
judge id 2153	0.052	0.068	0.256	0.233		-4.310	-3.963
	[0.153]	[0.193]	[0.557]	[0.526]		[-0.829]	[-0.752]
judge id 2154	0.052		0.518			-3.319	
	[0.158]		[1.152]			[-0.650]	
judge id 2155	0.063	0.078	0.254	0.219	0.012	-3.437	-3.098
	[0.193]	[0.229]	[0.564]	[0.512]	[0.029]	[-0.685]	[-0.611]
judge id 2156	0.144	0.160	0.319	0.284		-2.334	-1.974
	[0.435]	[0.466]	[0.701]	[0.658]		[-0.457]	[-0.382]
judge id 2157	0.074	0.094	0.226	0.251		-3.408	-3.026
	[0.225]	[0.275]	[0.496]	[0.585]		[-0.675]	[-0.593]
judge id 2160	0.193	0.203	0.435	0.399		-1.975	-1.748
	[0.575]	[0.583]	[0.963]	[0.936]		[-0.385]	[-0.337]
judge id 2161	0.122	0.134	0.335	0.291	0.028	-2.490	-2.198
	[0.363]	[0.384]	[0.725]	[0.660]	[0.065]	[-0.481]	[-0.420]
judge id 2162	0.044	0.058	0.172	0.152		-4.225	-3.885
	[0.141]	[0.179]	[0.388]	[0.357]		[-0.874]	[-0.796]
judge id 2163	0.218	0.282	0.347	0.463		-1.359	-0.481
	[0.635]	[0.790]	[0.749]	[1.050]		[-0.260]	[-0.091]
judge id 2164	0.166	0.184	0.363	0.350		-2.239	-1.843
	[0.510]	[0.547]	[0.803]	[0.814]		[-0.451]	[-0.368]
judge id 2165	0.062	0.076	0.192	0.178	-0.012	-3.527	-3.167
	[0.197]	[0.234]	[0.441]	[0.438]	[-0.029]	[-0.733]	[-0.654]
judge id 2166	0.103	0.135	0.248	0.313	0.038	-2.885	-2.272
	[0.314]	[0.394]	[0.558]	[0.734]	[0.090]	[-0.576]	[-0.446]
judge id 2167	-0.004	0.017	0.194	0.155	-0.061	-5.087	-4.581
	[-0.011]	[0.048]	[0.421]	[0.349]	[-0.140]	[-0.977]	[-0.866]
judge id 2168	0.043	0.064	0.167	0.191	-0.060	-4.028	-3.594
	[0.141]	[0.205]	[0.392]	[0.478]	[-0.145]	[-0.863]	[-0.765]
judge id 2169	0.116	0.123	0.324	0.254	0.016	-2.627	-2.426
	[0.367]	[0.376]	[0.743]	[0.618]	[0.039]	[-0.541]	[-0.495]
judge id 2170	0.090	0.100	0.281	0.223	-0.039	-4.100	-3.844
	[0.275]	[0.296]	[0.630]	[0.528]	[-0.090]	[-0.818]	[-0.758]
judge id 2171	0.043	0.064	0.271	0.250	-0.020	-3.557	-3.076

	[0.126]	[0.181]	[0.595]	[0.565]	[-0.045]	[-0.695]	[-0.591]
judge id 2172	0.209	0.248	0.290	0.363		-1.859	-1.138
	[0.635]	[0.730]	[0.637]	[0.850]		[-0.369]	[-0.224]
judge id 2173	0.095	0.094	0.320	0.253		-2.713	-2.630
	[0.308]	[0.295]	[0.742]	[0.627]		[-0.570]	[-0.547]
judge id 2174	0.091	0.103	0.293	0.266		-3.168	-2.865
	[0.271]	[0.296]	[0.659]	[0.637]		[-0.623]	[-0.557]
judge id 2176	0.298	0.256	0.515	0.430		-1.391	-1.040
	[0.872]	[0.723]	[1.077]	[0.947]		[-0.268]	[-0.199]
judge id 2177	0.086	0.105	0.302	0.304		-2.623	-2.284
	[0.251]	[0.297]	[0.636]	[0.678]		[-0.505]	[-0.435]
judge id 2179	0.110	0.117	0.334	0.305		-2.794	-2.577
	[0.330]	[0.340]	[0.749]	[0.722]		[-0.546]	[-0.499]
judge id 2181	0.075	0.130	0.172	0.293		-3.379	-2.330
	[0.217]	[0.363]	[0.370]	[0.653]		[-0.621]	[-0.429]
judge id 2182	0.185	0.194	0.424	0.375	0.050	-1.576	-1.323
	[0.572]	[0.582]	[0.956]	[0.893]	[0.117]	[-0.319]	[-0.265]
judge id 2183	0.081	0.102	0.273	0.280	0.041	-2.976	-2.538
	[0.250]	[0.301]	[0.631]	[0.664]	[0.101]	[-0.604]	[-0.505]
judge id 2184	0.114		0.311			-2.748	
	[0.340]		[0.684]			[-0.533]	
judge id 2185	0.160	0.178	0.337	0.374		-2.135	-1.853
	[0.488]	[0.522]	[0.745]	[0.860]		[-0.420]	[-0.360]
judge id 2186	0.050	0.038	0.268	0.188		-3.421	-3.721
	[0.149]	[0.110]	[0.583]	[0.423]		[-0.665]	[-0.713]
judge id 2187	0.155		0.433			-1.984	
	[0.460]		[0.935]			[-0.384]	
judge id 2188	0.154	0.170	0.340	0.307		-1.977	-1.652
	[0.469]	[0.497]	[0.745]	[0.710]		[-0.390]	[-0.322]
judge id 2189	0.207	0.236	0.447	0.514		0.018	0.561
	[0.609]	[0.668]	[0.979]	[1.166]		[0.003]	[0.107]
judge id 2190	0.069		0.223			-3.101	
	[0.209]		[0.503]			[-0.613]	
judge id 2191	0.110	0.122	0.341	0.298	-0.020	-2.806	-2.534
	[0.324]	[0.345]	[0.737]	[0.677]	[-0.046]	[-0.540]	[-0.482]
judge id 2193	0.028	0.033	0.280	0.239		-3.740	-3.557
	[0.082]	[0.093]	[0.626]	[0.560]		[-0.720]	[-0.676]
judge id 2194	0.148		0.424			-2.872	
	[0.433]		[0.937]			[-0.555]	
judge id 2195	0.228	0.234	0.425	0.366		-2.245	-2.067
	[0.679]	[0.674]	[0.926]	[0.834]		[-0.434]	[-0.395]
judge id 2196	0.247	0.259	0.357	0.324	0.246	-1.484	-1.173
	[0.774]	[0.784]	[0.780]	[0.743]	[0.582]	[-0.300]	[-0.235]
judge id 2198	0.179	0.203	0.356	0.361		-2.338	-1.891
	[0.558]	[0.614]	[0.800]	[0.850]		[-0.473]	[-0.380]
judge id 2200	0.132	0.151	0.249	0.223		-2.576	-2.181
	[0.433]	[0.476]	[0.571]	[0.532]		[-0.538]	[-0.451]
judge id 2201	0.064	0.084	0.214	0.190	0.033	-3.760	-3.400
	[0.203]	[0.257]	[0.471]	[0.440]	[0.076]	[-0.768]	[-0.689]
judge id 2202	-0.007	0.014	0.155	0.149		-5.067	-4.522

	[-0.022]	[0.041]	[0.336]	[0.335]		[-0.972]	[-0.859]
judge id 2203	0.084	0.116	0.274	0.278		-3.228	-2.404
	[0.251]	[0.332]	[0.591]	[0.634]		[-0.622]	[-0.458]
judge id 2205	0.061	0.074	0.318	0.264	-0.033	-3.079	-2.797
	[0.187]	[0.220]	[0.739]	[0.651]	[-0.082]	[-0.624]	[-0.563]
judge id 2206	0.043	0.055	0.268	0.234	-0.057	-3.511	-3.212
	[0.129]	[0.160]	[0.607]	[0.558]	[-0.135]	[-0.696]	[-0.631]
judge id 2207	0.046	0.052	0.293	0.245		-3.413	-3.193
	[0.137]	[0.150]	[0.661]	[0.584]		[-0.672]	[-0.621]
judge id 2208	-0.040	-0.034	0.208	0.180	-0.139	-5.726	-5.499
	[-0.121]	[-0.098]	[0.479]	[0.438]	[-0.337]	[-1.131]	[-1.076]
judge id 2209	0.120	0.145	0.243	0.274	0.058	-2.490	-2.010
	[0.370]	[0.429]	[0.543]	[0.643]	[0.134]	[-0.496]	[-0.396]
judge id 2210	0.166	0.183	0.384	0.363	0.074	-1.753	-1.406
	[0.488]	[0.515]	[0.830]	[0.818]	[0.168]	[-0.336]	[-0.265]
judge id 2212	0.111	0.117	0.322	0.266	0.033	-2.597	-2.357
	[0.349]	[0.356]	[0.756]	[0.663]	[0.081]	[-0.535]	[-0.482]
judge id 2215	0.178	0.220	0.330	0.353	0.075	-1.768	-1.137
	[0.549]	[0.653]	[0.732]	[0.836]	[0.168]	[-0.356]	[-0.227]
judge id 2216	0.151	0.159	0.395	0.341	0.005	-2.146	-1.904
	[0.459]	[0.465]	[0.871]	[0.787]	[0.012]	[-0.421]	[-0.370]
judge id 2217	0.252		0.532			-1.402	
	[0.748]		[1.168]			[-0.270]	
judge id 2218	0.211	0.279	0.405	0.448		-1.460	-0.944
	[0.621]	[0.787]	[0.880]	[1.007]		[-0.281]	[-0.178]
judge id 2219	0.096	0.121	0.268	0.286	0.054	-2.928	-2.439
	[0.285]	[0.345]	[0.593]	[0.650]	[0.125]	[-0.569]	[-0.467]
judge id 2220	0.011	0.034	0.185	0.165	-0.055	-4.252	-3.828
	[0.034]	[0.097]	[0.403]	[0.372]	[-0.125]	[-0.819]	[-0.730]
judge id 2221	0.103	0.123	0.241	0.210	0.014	-3.091	-2.690
	[0.327]	[0.378]	[0.532]	[0.486]	[0.033]	[-0.624]	[-0.538]
judge id 2222	0.093	0.113	0.208	0.177	0.031	-3.238	-2.840
	[0.293]	[0.344]	[0.455]	[0.404]	[0.070]	[-0.655]	[-0.570]
judge id 2223	0.183	0.192	0.314	0.241	0.120	-2.078	-1.810
	[0.596]	[0.605]	[0.705]	[0.570]	[0.283]	[-0.434]	[-0.376]
judge id 2224	0.165	0.148	0.479	0.361	0.025	-1.459	-1.835
	[0.487]	[0.428]	[1.032]	[0.835]	[0.059]	[-0.288]	[-0.358]
judge id 2225	0.100	0.115	0.324	0.295	0.017	-2.820	-2.495
	[0.294]	[0.324]	[0.707]	[0.663]	[0.039]	[-0.533]	[-0.464]
judge id 2226	0.038	0.056	0.230	0.205	0.020	-3.796	-3.410
	[0.111]	[0.156]	[0.492]	[0.454]	[0.045]	[-0.714]	[-0.633]
judge id 2227	0.197	0.203	0.371	0.303		-2.236	-2.062
	[0.615]	[0.615]	[0.815]	[0.710]		[-0.450]	[-0.412]
judge id 2228	0.097	0.129	0.183	0.234		-2.870	-2.237
	[0.288]	[0.369]	[0.393]	[0.528]		[-0.557]	[-0.431]
judge id 2229	0.080	0.097	0.239	0.221	0.047	-3.069	-2.718
	[0.241]	[0.282]	[0.525]	[0.512]	[0.108]	[-0.600]	[-0.527]
judge id 2231	0.129	0.154	0.382	0.363		-2.518	-2.088
	[0.388]	[0.445]	[0.847]	[0.833]		[-0.495]	[-0.404]
judge id 2232	0.017	0.028	0.258	0.230	-0.076	-4.305	-3.997

	[0.049]	[0.078]	[0.566]	[0.528]	[-0.175]	[-0.818]	[-0.751]
judge id 2233	0.101	0.120	0.294	0.283		-2.876	-2.533
	[0.299]	[0.341]	[0.641]	[0.635]		[-0.551]	[-0.479]
judge id 2234	-0.035	-0.018	0.163	0.154		-4.823	-4.404
	[-0.107]	[-0.053]	[0.379]	[0.381]		[-0.984]	[-0.890]
judge id 2235	0.102	0.108	0.337	0.334	-0.003	-2.645	-2.445
	[0.301]	[0.309]	[0.749]	[0.773]	[-0.007]	[-0.513]	[-0.471]
judge id 2237	0.139	0.147	0.392	0.365	0.206	-2.793	-2.580
	[0.420]	[0.432]	[0.908]	[0.902]	[0.498]	[-0.553]	[-0.508]
judge id 2238	0.120	0.133	0.252	0.211		-2.750	-2.420
	[0.383]	[0.411]	[0.562]	[0.494]		[-0.564]	[-0.492]
judge id 2240	0.112	0.141	0.257	0.265		-2.588	-2.058
	[0.346]	[0.419]	[0.572]	[0.622]		[-0.516]	[-0.407]
judge id 2241	0.064	0.077	0.237	0.212	-0.009	-3.333	-3.000
	[0.197]	[0.228]	[0.531]	[0.504]	[-0.021]	[-0.667]	[-0.595]
judge id 2244	0.121		0.287			-2.748	
	[0.353]		[0.617]			[-0.524]	
R-squared	0.691	0.714	0.605	0.675	0.795	.	.