ESSAY

IDEOLOGY, COLLEGIALITY, AND THE D.C. CIRCUIT: A REPLY TO CHIEF JUDGE HARRY T. EDWARDS

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IN an essay published in the October 1998 issue of the Virginia Law Review, Chief Judge Harry T. Edwards responds to my article analyzing the role of ideology in the decisions of the United States Court of Appeals for the District of Columbia Circuit concerning environmental regulation. It is somewhat sobering when one of the Nation’s leading federal appellate judges criticizes one’s work with great vehemence. Nonetheless, as this reply makes plain, Chief Judge Edwards is simply wrong with respect to each of the numerous criticisms that he levels against my work. Not a single one of his arguments weakens in any way the force of my findings.

The discussion proceeds as follows. Part I summarizes the principal claims made in my original article. Part II responds to the six sets of objections (each of which contains many independent components) that Chief Judge Edwards levels against my methodology. Part III takes issue with arguments advanced by Chief Judge Edwards in support of his account of how the D.C. Circuit decides cases. Part IV explains why Chief Judge Edwards’ views concerning the role of empirical studies of the judicial function are misguided.

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3 See infra notes 212–18 and accompanying text.
This Essay thus unfolds on two levels. First, it provides a methodical and detailed response to each of Chief Judge Edwards’ criticisms of my article. This response should be of interest not only to individuals who are trying to evaluate the validity of these criticisms but also to future empirical researchers, who might benefit from the discussion of the various methodological choices. Second, this Essay is intended to cast some further light on the processes of adjudication, particularly in multimember courts, and on the use of empirical methods to study the judicial function. These issues are central to the work of a broader audience.

I. ENVIRONMENTAL REGULATION, IDEOLOGY, AND THE D.C. CIRCUIT

My article studied challenges to decisions of the Environmental Protection Agency (“EPA”) between 1970 and 1994.\textsuperscript{4} It examined three principal sets of hypotheses concerning the impact on judicial decisionmaking of a judge’s ideology—in this case, the judge’s policy preferences regarding the stringency of environmental regulation. Because data on a judge’s ideology is not readily available, the article used as a proxy for ideology the views generally held by the party of the President who appointed the judge.\textsuperscript{5}

First, the study sought to determine whether “Democratic judges are more likely than Republicans to vote to reverse the EPA when the challenger is an environmental group” and whether “Republican judges are more likely than Democrats to do so when the challenger is an industry group.”\textsuperscript{6} Second, it investigated whether the degree of ideological division was affected by the nature of the arguments presented to the court. In particular, the article considered whether “[i]deological voting is more pronounced with respect to procedural challenges than statutory challenges.”\textsuperscript{7} Third, the article examined panel composition effects—whether a judge’s vote is affected by the identity (and ideology) of her colleagues on the panel.\textsuperscript{8}

\begin{footnotesize}
\begin{itemize}
  \item[4] Revesz, supra note 2, at 1721.
  \item[5] See id. at 1718. For further discussion concerning the use of this proxy, see infra notes 100–15 and accompanying text.
  \item[6] Id. at 1728.
  \item[7] Id. at 1729.
  \item[8] See id. at 1732–34.
\end{itemize}
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The article employed a methodology designed to “ensure that differences in the voting records of judges could be ascribed to differences in judicial philosophy among the judges, rather than to differences in the types of cases the judges heard.” Thus, it divided the years between 1970 and 1994 into periods during which the composition of the court remained relatively stable. For each period, it examined the voting records of only the judges who remained on active status during the whole period. The study focused on four periods that took place primarily in the 1970s and six periods that spanned the mid-1980s through the early 1990s.

My study found little evidence of ideological voting in the 1970s, and Chief Judge Edwards’ response does not address itself to these periods. Thus, my reply is also confined to the second era.

For each of the periods, I initially performed a univariate analysis, under which the effects of the different variables were analyzed one at a time. Then, partly as a check on the validity of these results, for one of the periods in each era I also performed a multivariate analysis, which isolates the effects on judicial votes of changes in one variable while all other variables are held constant.

The empirical analysis showed that ideology had significant effects on some categories of judicial votes. For industry challenges to EPA decisions, where the effects were strongest, Republican judges were significantly more likely to vote to reverse EPA decisions than were Democratic judges. In the case of challenges by environmental advocates, Democratic judges were significantly more likely to vote to reverse EPA decisions than were Republican judges.

The ideological divisions were greatly affected by the nature of the arguments presented to the panel. There were no statistically significant differences in the way Democrats and Republicans

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9 Id. at 1721.
10 See id. at 1723.
11 See id. at 1725–27.
12 See id. at 1742, 1747, 1752–54, 1759, 1763 n.94.
13 See Edwards, supra note 1, at 1340.
14 See Revesz, supra note 2, at 1738.
15 See id. at 1757.
16 See id. at 1743.
17 See id. at 1738–43, 1759–60.
18 See id. at 1738–43.
voted on statutory issues, but the differences were highly significant with respect to procedural issues in the case of industry challenges.\textsuperscript{19}

The composition of the panel also strongly affected voting patterns. A Republican judge was significantly more likely to vote to reverse on an industry challenge if she had at least one Republican colleague on the panel. Conversely, a Democratic judge was significantly less likely to do so if she had at least one Democratic colleague.\textsuperscript{20}

The article also measured the difference in reversal rates between panels with a Republican majority and panels with a Democratic majority. It found that these differences were staggeringly great with respect to procedural issues in industry challenges to EPA regulations. Indeed, “[t]he reversal rate for panels with two Democrats and one Republican ranges between 2\% and 13\%, whereas for panels with two Republicans and one Democrat the reversal rate ranges from 54\% to 89\%.”\textsuperscript{21}

II. CHIEF JUDGE EDWARDS’ CRITICISMS

Chief Judge Edwards levels six sets of methodological criticisms against my article. He objects to the appropriateness of the sample, the scope of the sample, the coding of cases, the use of ideology as a variable, the specification of the model, and my characterization of dissents in the D.C. Circuit. None of his criticisms, however, withstands scrutiny.\textsuperscript{22}

A. Appropriateness of Sample

Chief Judge Edwards has three separate objections to the sample used for my empirical study. He claims that I examined only the published opinions of the D.C. Circuit and that, as a result, my conclusions stem from an unrepresentative sample of the cases de-

\textsuperscript{19} See id. at 1747–50, 1759–60.
\textsuperscript{20} See id. at 1752–53, 1754–55, 1760.
\textsuperscript{21} Id. at 1763.
\textsuperscript{22} To aid the reader who wants to examine our pieces side by side, I use the same section headings as does Chief Judge Edwards (though for clarity I divide some of these sections into subsections). Such comparison of our respective claims would have been easier if our pieces had been published contemporaneously. I therefore regret that neither the Virginia Law Review nor Chief Judge Edwards alerted me to his response so that I could reply in the same issue.
decided by his court. He also complains that on the basis of an examination only of environmental cases, I make general claims about the D.C. Circuit’s jurisprudence.

1. Treatment of Unpublished Opinions

Chief Judge Edwards asserts that my work is based only on published opinions of the court, that these published opinions are only a small proportion of all cases that the court decides, and that published opinions are a biased sample of the full universe of cases because the unpublished opinions are always unanimous.

Chief Judge Edwards gives statistics from 1995, 1996, and 1997 to suggest how serious the bias of my sample might be. During those years, published opinions constituted only 22.5%, 23.1%, and 19.9%, respectively, of all cases decided by the court.

My sample, however, was not limited to published opinions. In fact, the sample included the very dispositions Chief Judge Edwards accused me of omitting. As my article indicates, the data set was constructed by conducting searches on the LEXIS and Westlaw databases. These databases include unpublished opinions. In fact, my article states that a reason for conducting searches in both LEXIS and Westlaw (as opposed to using just one of these services) was that the two databases had “somewhat different coverage of unreported decisions”—that is, decisions that do not result in published opinions.

As my article acknowledges, there were a few cases, primarily “table opinions” published in the Federal Reporter Series, about

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23 See Edwards, supra note 1, at 1343.
24 See id. at 1344.
25 See id. at 1345.
26 See id. In Chief Judge Edwards’ terms: “[I]n 1997, the court issued 1298 lead-case dispositions, but only 259 of those dispositions resulted in published opinions. Likewise, in 1996, there were 1247 dispositions, but only 288 opinions, while in 1995 there were 1226 dispositions and only 276 opinions were issued.” Id.
27 This issue is not even presented for the periods primarily spanning the 1970s. As Chief Judge Edwards’ colleague, Judge Patricia Wald, has noted, “When I first came on the court 17 years ago, it was virtually unheard of for an agency case to get summary treatment.” Patricia M. Wald, Judicial Review in Midpassage: The Uneasy Partnership Between Courts and Agencies Plays On, 32 Tulsa L.J. 221, 237 (1996).
28 See Revesz, supra note 2, at 1721 n.15.
29 Id.
which the electronic databases did not contain sufficient information to determine whether the case involved a challenge to a substantive environmental policy, or to determine how to code an element necessary for the coding protocol. I indicated in the article, though, that only one or two cases per period had to be excluded from the study for this reason. Thus, this problem was not a serious one.

Because Chief Judge Edwards, as Chief Judge of the D.C. Circuit, is in a position to be especially familiar with his court’s administrative practices, I was sufficiently concerned by his challenge that I undertook to confirm that I had not overlooked unpublished cases. After double checking with both the D.C. Circuit and West Publishing Company, I confirmed that Chief Judge Edwards is mistaken. It is worth dealing with this issue in some detail because it will be relevant to subsequent empirical studies of the functioning of the federal courts of appeals.

First, the D.C. Circuit’s clerk indicated in a letter:

*The D.C. Circuit routinely sends West Publishing a copy of anything issued by the court that constitutes a final disposition. This includes Orders issued by three-judge panels (as opposed to an order issued by the Clerk, such as that granting an appellant’s motion for voluntary dismissal), a judgment with or without attached memorandum issued by a three-judge panel and a printed slip opinion. . . .*  

The formal slip opinion is the only form of decision that is considered “published” and able to be cited as precedent. *West has no discretion with a slip opinion. It is to be published in the Federal Reporter series.*

The judgments issued by the court do not have their text published. The issuance of the judgment is acknowledged, however, by West including its docket number and other information in a Table of Unpublished Dispositions which appears from time to time in the Federal Reporter. *West doe[s] not choose which judgments are included in the Table. All are included.*

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30 My study did not include cases “such as requests for attorneys’ fees or for information under the Freedom of Information Act.” Id. at 1725–26 n.27.

31 See id.
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The resolution of dispositive motions is by way of orders by three-judge panels. The text of these orders does not appear in the Federal Reporter nor are the cases included in the previously mentioned Table. However, the text of orders and judgments are included in Westlaw along with a cautionary statement that they are not citable.32

Thus, the clerk’s letter makes clear that published opinions, unpublished judgments, and the resolution of dispositive motions are all contained in the Westlaw database.

Second, the West Publishing Company confirmed that all “table” cases—that is, unpublished judgments—listed in the Federal Reporter series are included in the Westlaw database.33 Moreover, since 1988, Westlaw has included the full text of these dispositions.34 Indeed, the handful of cases mentioned above in which the text of the decision was not available were decided prior to that year.35

Third, analysis of the D.C. Circuit’s “table cases” in which either the EPA or one of its administrators was a party (the same protocol used to generate the set of cases in my study36) for the periods spanning the mid-1980s through the early 1990s, confirmed that each of the cases appeared in the electronic list from which I had

32 Letter from Mark J. Langer, Clerk, United States Court of Appeals for the District of Columbia Circuit, to Aaron Avila (Apr. 1, 1999) (emphasis added) (on file with the Virginia Law Review Association). Only dispositions by the Clerk of procedural motions, see D.C. Cir. R. 27(e)(1), are not included in the Westlaw database. See Letter of Mark J. Langer, supra. Such dispositions, however, would not have been included in my study because they do not involve decisions by judges and because they do not involve substantive challenges to environmental policy. See Revesz, supra note 2, at 1725–26 n.27.

33 Conversation of Aaron Avila with Fred Wheeler, West Publishing Co. (Feb. 17, 1999) (confirming that Westlaw’s database for the D.C. Circuit contains all cases reported (full and “table”) that are bound in the F.2d and F.3d reporters). This feature of the D.C. Circuit’s practice was in fact recently highlighted by one of Chief Judge Edwards’ colleagues. See David S. Tatel, Some Thoughts on Unpublished Decisions, 64 Geo. Wash. L. Rev. 815, 815 (1996) (highlighting the “[a]vailability of all decisions on electronic databases”).

34 Conversation of Aaron Avila with Kate Maceachern, West Publishing Co. (Mar. 18, 1999). This information is also presented in the “Scope Database” for the Westlaw database containing the D.C. Circuit’s decisions.

35 See supra notes 29–31 and accompanying text.

36 See Revesz, supra note 2, at 1721 n.15.
constructed the database for my study. Therefore, no cases were missing from my sample.

In summary, Chief Judge Edwards’ assertion that my sample was restricted to published opinions is incorrect. Both the standard operating procedures of his own court and Westlaw’s practices ensure that all of the cases he was concerned that I had missed were in fact included in my data set.

2. Formulation of the Conclusions

Chief Judge Edwards also maintains that I inappropriately use a study of environmental cases to draw conclusions concerning judicial decisionmaking in general. My article, however, makes clear that its conclusions are specific to the cases that were the subject of the study, not to a broader set of cases. For example, the title of the article is “Environmental Regulation, Ideology, and the D.C. Circuit.” The first paragraph of the introduction states that the article will provide “an empirical examination of judicial decisionmaking in environmental cases.” The next sentence in the same paragraph introduces the hypotheses of ideological voting: “In environmental cases, the allegation goes, judges appointed by Republican Presidents vote principally for laxer regulation and judges appointed by Democratic Presidents vote for more stringent regulation.” The article’s first section, which explains the construction of the data set, states that the analysis in the article is based on “challenges to decisions by the Environmental Protection Agency.” The second section, which deals with the hypotheses tested, begins as follows: “The study was designed to test nine hypotheses concerning the impact of ideology on judges’ votes on challenges to environmental policies.” In all, the words “environment” or “environmental”

37 See Memorandum from Aaron Avila to Richard Revesz (Feb. 16, 1999) (on file with the Virginia Law Review Association).
38 Judge Wald makes the same error in describing my study. See Patricia M. Wald, A Response to Tiller and Cross, 99 Colum. L. Rev. 235, 246 (1999).
39 See Edwards, supra note 1, at 1343–44.
40 Revesz, supra note 2, at 1717 (emphasis added).
41 Id. (emphasis added).
42 Id. at 1717–18 (emphasis added).
43 Id. at 1721 (emphasis added).
44 Id. at 1727.
appear eighty-eight times throughout the article—fifty-five times in the text (on average once every printed page), twenty-three times in the footnotes, and ten times in textual tables.

Chief Judge Edwards singles out for particular criticism my statement of two of the article’s conclusions, contained in two sentences in the third paragraph of the introduction to my article.\(^{45}\) He says that I do not specify that these conclusions apply to “the EPA sample.”\(^{46}\) However, in the preceding two paragraphs, which describe the outline of the study, the terms “environmental regulation,” “environmental law,” and “environmental cases” all appear in the text (some more than once).\(^{47}\) It is thus clear that the conclusions discussed in the third paragraph pertain to the study described in the prior two paragraphs.

Perhaps Chief Judge Edwards is concerned that the press might misunderstand my study and thereby use it as a vehicle to attack the federal judiciary. Indeed, Chief Judge Edwards begins his essay by quoting a summary of my piece that appeared in the *Legal Times*.\(^{48}\) The portion that he quotes does not indicate that my article’s conclusions apply only to environmental cases. At first glance, this omission might seem to lend fuel to Chief Judge Edwards’ concern that my conclusions could be taken out of context and expanded beyond the scope of the work that I actually conducted. However, the journalist states in a portion of the piece to which Chief Judge Edwards does not refer, that I conducted “an empirical study of all the challenges to Environmental Protection Agency regulations decided by the [D.C. C]ircuit between 1970 and 1994.”\(^{49}\)

I do not mean to suggest by this discussion that environmental cases are necessarily unique in giving rise to the types of ideological divisions described in my article. There is no compelling reason to believe that environmental cases would be exceptional in this

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\(^{45}\) See Edwards, supra note 1, at 1343–44 (citing Revesz, supra note 2, at 1719).

\(^{46}\) Edwards, supra note 1, at 1344.

\(^{47}\) See Revesz, supra note 2, at 1717–18.


\(^{49}\) Schmidt, supra note 48, at 6. Similarly, a more recent article in the same publication described my study as involving “the D.C. Circuit’s handling of cases related to the Environmental Protection Agency.” Carrie Johnson, Closed Circuit?, *Legal Times*, Feb. 8, 1999, at 6.
regard. My own intuition is that a similar pattern would be found with respect to a broader universe of cases in which different administrations had markedly different policy preferences over issues of relatively high political salience.\textsuperscript{50} Other regulatory programs involving health and safety issues—involving agencies such as the Occupational Safety and Health Administration, Consumer Product Safety Commission, and Food and Drug Administration—would seem to fit the bill. Nonetheless, my study was limited to environmental cases, and the conclusions that can be drawn directly from that study apply only to such cases.

3. Breadth of the Sample

In a related vein, Chief Judge Edwards complains that my article is too “narrow in scope” because it deals only with environmental cases.\textsuperscript{51} He therefore claims that “[my] analysis yields results of little value.”\textsuperscript{52}

I chose environmental cases as my sample because I was interested in studying how the institutional arrangements governing judicial review affect environmental regulation. Looking at a broader set of D.C. Circuit cases might have been preferable from the perspective of the issues that most concern Chief Judge Edwards but would have been inferior for my purposes. Indeed, if I had tried to make either positive or normative statements concerning environmental regulation based on a study that included cases in other areas, I would probably have been criticized for looking at a sample that was too broad. The D.C. Circuit plays a sufficiently central role with respect to environmental regulation, and environmental regulation has a sufficiently important impact on the economy, that studies focusing on the D.C. Circuit’s treatment of environmental cases are worth undertaking.

B. Scope of Sample

Chief Judge Edwards complains that, in order to make the ideological divisions look more pronounced, I manipulated the experi-

\textsuperscript{50} See infra notes 99–101 and accompanying text (discussing perspectives of the Carter and Reagan administrations over environmental policy).

\textsuperscript{51} Edwards, supra note 1, at 1336; see id. at 1337.

\textsuperscript{52} Id. at 1337.
mental methodology, selectively presented the multivariate results, and focused only on procedural challenges.\textsuperscript{53}

1. Experimental Methodology

Chief Judge Edwards makes the strong and wholly unfounded accusation that I manipulated the experimental methodology in order to find that ideology affects judicial votes. He says:

Revesz found no statistically significant results in many of the time periods and circumstances studied. Where he reached this outcome, however, he was never deterred: instead he turned to other configurations of data, apparently in the hopes of producing more interesting results. In other words, this was hardly an experimental methodology designed to discover and report whatever outcome emerged; instead, it represented a winnowing process in which progressively fewer and fewer of the data were considered as the author set his sights on finding some set of data that might produce notable consequences.\textsuperscript{54}

I am quite puzzled about what basis Chief Judge Edwards has for ascribing such motives to me, or for imagining that my analysis followed the sequence that he describes. His essay does not provide any support for these allegations, nor could it, because they are untrue.

Chief Judge Edwards seems to think that my goal in the article originally was to study judicial decisionmaking in the 1970s. When I found no evidence that ideology played a role, he thinks I switched gears and decided to study the mid-1980s through early 1990s period instead. For these years, under Chief Judge Edwards’ account, my initial goal was to study statutory challenges. He appears to allege, however, that when I found no evidence that ideology played a role in those cases, I turned my attention to procedural challenges.

Quite to the contrary, my intention from the outset was to study the questions that I ended up examining. This research plan is set forth in my application for funding from the National Science Foundation (“NSF”), which I prepared before I had analyzed any

\textsuperscript{53} See id. at 1344.

\textsuperscript{54} Id.
of the data and before I had even finished coding the cases.\textsuperscript{55} The application indicates that I would study a set of periods spanning the 1970s and another set spanning the mid-1980s through the early 1990s.\textsuperscript{56} The application states: “[I]t is hypothesized that Democratic judges are more likely to vote to reverse or remand regulations when the challenger is an environmental group, and that Republican judges are more likely to do so when the challenger is an industry group.”\textsuperscript{57} It also indicates that this hypothesis would be studied with respect to both statutory and procedural claims.\textsuperscript{58} Finally, the application notes that the effects of panel composition would be studied as well: “The main hypothesis is that, other things being equal, judges are likely to act less ideologically when the panel is heterogeneous (contains members of both political parties) than when it is homogeneous.”\textsuperscript{59} Contrary to Chief Judge Edwards’ characterization, my research protocol had been established well before I had any empirical results.

2. Presentation of the Multivariate Results

Chief Judge Edwards next objects to the fact that I presented multivariate results for only one of the six periods spanning the mid-1980s through the early 1990s.\textsuperscript{60} I did so because presenting the multivariate data takes up considerable space,\textsuperscript{61} and it seemed that little would be gained by flooding the readers with repetitive statistics, particularly given the fact that the time periods have significant overlaps (approximately six out of eight years are common to all six periods).\textsuperscript{62} My article indicates that I reported the results for the period in which “the estimation[] had the greatest predictive power.”\textsuperscript{63}

\textsuperscript{56} See id. at 8.
\textsuperscript{57} Id. at 5.
\textsuperscript{58} See id. at 6.
\textsuperscript{59} Id.
\textsuperscript{60} See Edwards, supra note 1, at 1344–45.
\textsuperscript{61} See Revesz, supra note 2, at 1758 tbl. 13.
\textsuperscript{62} See id. at 1726.
\textsuperscript{63} Id. at 1757.
In fact, for each of the multivariate claims that I discussed in my article, there were comparably strong findings in the other five periods. My first claim was that a Republican judge was significantly more likely to reverse when there was at least one other Republican on the panel. For the period that I reported, this variable was significant at a 95% confidence level. Similarly, the variable was significant in all five other periods, at a 95% confidence level in one and at a 90% confidence level in the other four.

Second, I found that a Democratic judge was significantly less likely to reverse when there was at least one other Democrat on the panel. For the period that I reported, this variable was significant at a 95% confidence level. Similarly, the variable was significant at a 95% confidence level in two other periods at a 90% confidence level in one period, not significant in one period, and the variable could not be estimated in the remaining period because of limitations in the data set.

Third, Republican judges were significantly more likely to reverse in cases raising procedural claims. For the period that I reported, the variable was significant at a 99% confidence level. Similarly, this variable was significant at a 99% confidence level in all five other periods.

Fourth, “the existence of procedural claims did not significantly affect the votes of Democrats” in the period reported. The same was true in four of the five other periods. In summary, the results for the period that I reported are similar to the results in the other periods.

3. Treatment of Nonprocedural Challenges

Finally, Chief Judge Edwards says that even for the period covered by the multivariate analysis, I analyzed “only so-called ‘procedural challenges’ to EPA action, and not statutory claims.” His assertion reveals a misunderstanding of the technique of multivariate analysis.

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64 See Revesz, supra note 2, at 1758–60.
65 See id. at 1759–60 & n.87.
66 See id. at 1759–60 & n.88.
67 See id. at 1760 & n.89.
68 Id. at 1760.
69 Edwards, supra note 1, at 1344.
One of the independent variables in my analysis was determined by whether a case contained a procedural issue.\textsuperscript{70} If such a challenge was present, the respective independent variable was coded as “1”; otherwise it was coded as “0”.\textsuperscript{71} The reason for including such a variable was to ascertain whether judges treat cases raising procedural challenges differently from cases that do not raise such challenges, and, in particular, whether the ideological divisions on the court were more pronounced when such challenges were present.\textsuperscript{72} But it is not accurate to say, as Chief Judge Edwards does, that only procedural challenges were analyzed.\textsuperscript{73} All the cases were analyzed; it is simply that one element of the analysis examined whether the presence of procedural challenges had a significant effect on judicial decisionmaking. This approach is not “methodologically strange,”\textsuperscript{74} as Chief Judge Edwards terms it, but is the standard way—in fact, the only way—of performing multivariate analysis.

\textbf{C. Coding}

Chief Judge Edwards takes issue with various matters concerning the coding of cases. He objects to how I treated remands, how I coded the identity of the challengers, and how I dealt with multiple challenges to a single regulation and with multiple claims brought by a single challenger.

\textit{1. Treatment of Remands}

Chief Judge Edwards complains that by coding the outcome of each case in one of two ways, as either 1) an affirmance or 2) a reversal or remand of the EPA’s decision,\textsuperscript{75} I did not distinguish be-

\begin{itemize}
\item \textsuperscript{70} See Revesz, supra note 2, at 1757.
\item \textsuperscript{71} See id.
\item \textsuperscript{72} To make possible the analysis of whether the presence of procedural arguments had a different effect on judges of different parties, the estimation also included an interaction term, in which the independent variable, defined by the party of the appointing President, was multiplied by the independent variable defined by whether the case presented a procedural argument.
\item \textsuperscript{73} See Edwards, supra note 1, at 1344.
\item \textsuperscript{74} Id. at 1345.
\item \textsuperscript{75} See id. at 1345–46.
\end{itemize}
tween remands and outright reversals or between remands that vacate the agency’s order and those that do not.

In my article, I explain my reason for treating both reversals and remands as losses for the agency: “[I]n general, the agency cannot enforce a regulation while a remand is pending. Moreover, a remand can effectively block the regulation from ever going into force if, following the remand, there is a change of administration, or if the political support for the regulation weakens.”

My judgment is supported by an important empirical study of the administrative lawmaking system that found that remands frequently result in major changes in the agency’s position. Sometimes, moreover, the agency drops the proceedings or enters into a settlement following a remand. In addition, a considerable period of time elapses between the date of the remand and the date of the subsequent agency action; presumably this delay benefits the party that seeks to avoid regulation. Perhaps most significantly, the study found that a large plurality of the private attorneys who obtained remands from the reviewing court described the post remand outcome as very favorable to their interests.

I turn, then, to my decision not to distinguish between remands on the basis of whether they vacated the agency’s order. The significance of the point raised by Chief Judge Edwards appears to be that, if the agency can continue enforcing its decision despite a remand, perhaps the action of the court should be characterized more as an affirmance rather than as a reversal.

Chief Judge Edwards’ distinction between remands that vacate the agency’s decision and those that do not may be of current importance, but it was not during the period of the study. As Professor Richard Pierce notes, “[u]ntil the 1990s, a reviewing court routinely vacated and remanded an agency rule if the court held the rule arbitrary and capricious because of the agency’s failure...
to . . . engage in reasoned decisionmaking." The move toward a somewhat liberal use of remands without vacation is generally traced to *Allied-Signal v. NRC*, which was decided toward the end of the periods covered by my study. As a result, in only three cases in my sample for the periods spanning the mid-1980s through the early 1990s was there a remand without vacation.

The point that Chief Judge Edwards raises with respect to these different kinds of remands is an interesting one that should be considered by future researchers in the area. But because the practice did not become important until relatively recently, his criticism of my study on these grounds is inapposite.

2. Identity of the Challengers

Chief Judge Edwards also complains about the manner in which I coded the identity of the challengers. He notes that "Revesz too easily assumes that no cases are brought by environmental groups who actually are sympathetic to industry interests, and that no industry groups (for example, clean-up industry groups) ever support tougher environmental protection." Chief Judge Edwards is wrong to assert that I followed such a procedure. My goal was to test the hypotheses that "judges appointed by Republican Presidents vote principally for laxer regulation and judges appointed by Democratic Presidents vote for more stringent regulation." Thus, in coding the identity of the challengers, I looked at whether their ultimate goal was to strengthen or to weaken the regulations.

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83 988 F.2d 146 (D.C. Cir. 1993); see Pierce, supra note 82, at 75.
84 In three other cases, it was not possible to tell what type of remand it was. But because the majority of remands in my sample vacated the agency's decision, and because the norm at the time was to do so, it is reasonable to assume that these remands resulted in the agency's decision being vacated.
85 Edwards, supra note 1, at 1346.
86 Revesz, supra note 2, at 1718.
87 See Coding Protocol for Empirical Study of the D.C. Circuit (Feb. 4, 1995) (on file with the Virginia Law Review Association) [hereinafter Coding Protocol]; Memorandum from Colleen Shannon to Richard Revesz, Notes on the Coding Protocol by Question Number 4 (Oct. 13, 1995) (on file with the Virginia Law Review Association) ("Any challenge to an EPA regulation or decision that argued for a more stringent regulation or outcome was coded as an environmentalist challenge. Any challenge arguing for a laxer standard or outcome was coded as an industry challenge.").
In general, environmental groups sought the former and industry groups sought the latter, but there were exceptions. For example, the Hazardous Waste Treatment Council, a trade association representing firms that are engaged in cleanups at Superfund sites, generally challenged regulations that it considered too lax. This party was therefore identified as an environmental group—a group seeking more stringent regulation. 88 Thus, Chief Judge Edwards’ criticism with respect to this matter is misplaced.

3. Treatment of Multiple Challengers

As part of his criticism of my coding protocol, Chief Judge Edwards states that “frequently, multiple parties challenge an EPA action as both under-protective and over-protective of the environment.” 89 His concern appears to be that, if cases had to be characterized as presenting either an environmental challenge or an industry challenge, it would be difficult to know how to characterize a case that had both an environmental challenger and an industry challenger.

My article acknowledges that environmental litigation in the D.C. Circuit has the feature that Chief Judge Edwards ascribes to it:

In many cases in which industry groups challenge the EPA’s regulations as too stringent, environmental groups intervene in support of the EPA’s defense of the regulations and/or challenge the regulations as too lax. Conversely, in many cases in which environmental groups challenge the EPA’s regulations as too lax, industry groups intervene in support of the regulations and/or challenge the regulations as too stringent. 90

This feature of environmental litigation created no difficulty for my analysis. The unit for my analysis was the challenge, not the case. If a case presented two separate types of challenges (one by an industry group and one by an environmental group), each was coded

89 Edwards, supra note 1, at 1346.
90 Revesz, supra note 2, at 1736 (emphasis added).
separately. In essence, the case was treated in the same way as if the two challenges had not been consolidated. So, if a judge voted to affirm the agency on the industry challenge but to reverse it on the environmental challenge, two separate votes were recorded, one for each of the challenges.\footnote{See Coding Protocol, supra note 87.} Thus, the presence of industry and environmental groups arrayed on opposite sides of the same case presents no difficulty for my analysis.

4. Treatment of Multiple Claims

Chief Judge Edwards also notes that some cases may present both statutory and procedural challenges. He states that “such combined challenges” are “barriers to easy coding in any case.”\footnote{Edwards, supra note 1, at 1346.} Again, my coding took the phenomenon of combined challenges into account. If, for example, an industry petitioner raised both a procedural claim and a statutory claim, the two claims were coded separately. If a judge voted to reject the statutory claim but found the procedural claim meritorious (and reversed or remanded the agency decision on this basis), two separate votes were recorded, one for each of the claims.\footnote{See Coding Protocol, supra note 87.}

In this connection, Chief Judge Edwards also complains that I “leave[] unstated” the criteria by which I categorize challenges as “statutory” or “procedural.”\footnote{Edwards, supra note 1, at 1346.} My article, however, explains: “The following types of challenges were treated as procedural: lack of adequate response to comments, lack of adequate explanation in the rule’s statement of basis and purpose, lack of adequate notice or opportunity to comment, and improper ex parte communication.”\footnote{Revesz, supra note 2, at 1729 n.33.} In contrast, statutory challenges, as is made clear by the article’s frequent citation to \textit{Chevron U.S.A. v. Natural Resources Defense Council},\footnote{467 U.S. 837 (1984). This case is referred to 12 times throughout my article.} concern whether the statutory interpretations embodied in EPA decisions are contrary to the clear intent of Congress or are not permissible interpretations of the statute.\footnote{See Revesz, supra note 2, at 1730.}
Thus, none of Chief Judge Edwards’ complaints about the manner in which I coded the cases is well taken. There is ample justification for aggregating reversals and remands, and given the paucity in my sample of remands that did not vacate the agency’s judgment, disaggregating the different types of remands would have proven impractical. With respect to the identity of the challengers, the coding appropriately focused on whether their interest was laxer or more stringent regulation. Finally, the fact that a single challenger might raise more than one claim created no difficulty for my methodology.

D. “Ideology”

Chief Judge Edwards raises several objections concerning my treatment of the variable denoting the ideology of the judges. He takes issue with my choice of a proxy for ideology, with my suggestion that D.C. Circuit judges have a higher political profile than judges in other courts, and with my use of the term “ideology.”

Chief Judge Edwards complains that I use “as a proxy for ideology ‘the views generally held by the party of the appointing President.’” He says: “Without providing some statistical measure of the significance of the asserted correlation between political party and environmental policy, it is suspect for Revesz to assume that his ideological proxy is meaningful.”

As my article explains, during the periods spanning the mid-1980s to the early 1990s, all the Democratic judges in my sample were appointed by President Jimmy Carter and all the Republican judges by President Ronald Reagan. My article also notes: “In the 1980 election, Ronald Reagan pressed a strong agenda of deregulation in general, and environmental deregulation in particular. It is reasonable to expect that, at least to some extent, the views of the judges would mirror the divisions in society at large.”

Undoubtedly, it would have been better to have a direct measure of the ideology held by each of the D.C. Circuit judges at the time of their appointment. It would have been useful, for example, to know how the judges voted in presidential elections, what views

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96 Edwards, supra note 1, at 1347 (quoting Revesz, supra note 2, at 1718).
99 Id.
100 See id. at 1725 n.26.
101 Id. at 1747 n.69 (citations omitted).
they held with respect to deregulation, and what importance they attached to environmental regulation. Then, one could construct some measure of the individuals’ ideology and study the extent to which their ideology affected their subsequent decisions without having to resort to a proxy.

Because such information is not available to researchers, however, there is no alternative but to rely on some proxy for ideology. The proxy that I used has been employed in a large number of studies before mine, many of which are cited in my article.

Chief Judge Edwards attacks me for citing these studies in support of the proposition that the party of the President appointing the judge is a plausible proxy for judicial ideology. He says that I characterize these studies as “methodologically ‘suspect’” and terms my reference to these studies as a “self-undercutting citation.”

As I explain at some length in my article, however, the feature of these studies that I criticize is wholly unrelated to their use of this proxy. Instead, my complaint deals with the fact that these studies do not correct for changes in the composition of the court over time. The fact that the prior literature made one choice that could be improved upon does not mean that everything in that literature must be disregarded. In this area, as in practically all fields of knowledge, advances are generally cumulative.

My article also explains that in the case of D.C. Circuit judges, the use of the party of the appointing President as the proxy for judicial ideology is likely to be more appropriate than in the case of judges generally, because “[j]udges on the D.C. Circuit have a far higher political profile than do federal judges generally.” In this

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102 For an attempt along these lines concerning Supreme Court Justices, see Jeffrey A. Segal & Albert D. Cover, Ideological Values and the Votes of U.S. Supreme Court Justices, 83 Am. Pol. Sci. Rev. 557 (1989). Because the measure of ideology was constructed from newspaper editorials about the nominee, see id. at 559, this methodology is unlikely to be usable for court of appeals judges, whose nominations typically receive less media attention.

103 See Revesz, supra note 2, at 1718 n.6, 1722–23 n.18.

104 Edwards, supra note 1, at 1347 (citing Revesz, supra note 2, at 1718 n.6).

105 Id. at 1347

106 See Revesz, supra note 2, at 1718 n.6, 1721–23; supra notes 9–11 and accompanying text (discussing methodology in my article).

107 Revesz, supra note 2, at 1720; see id. at 1718 n.6.
connection, my article notes that of the four Democratic judges for the periods spanning the mid-1980s to early 1990s, one had been a member of the U.S. House of Representatives and another had been an Assistant Attorney General. Of the five Republican judges, one had served as a U.S. Senator, one as Deputy Attorney General, and another as an Assistant Attorney General. Thus, five of the nine judges (55.5%) who served in the periods spanning the mid-1980s through early 1990s held positions of high political visibility before their judicial appointment. Common sense suggests that individuals in such positions are especially likely to have ideologies that are known to the President who appointed them and to share the ideology of that President. Moreover, because a large proportion of important regulatory cases come before the D.C. Circuit, the administration is likely to care more about (and make greater efforts to ascertain) the views of potential nominees to the D.C. Circuit.

Chief Judge Edwards complains that I make “no attempt to compare the D.C. Circuit with other circuit courts, even anecdotally.” I felt confident making the assertion concerning the higher political profile of D.C. Circuit judges, however, as a result of my personal knowledge of the backgrounds of many, though of course not all, of the federal circuit court judges.

Because Chief Judge Edwards questions this conclusion, I conducted a similar inquiry into the composition of all the other circuits as of December 31, 1993—toward the end of the period covered by my study. Table I presents, for each circuit, the number of active judges and the number and percentage of these judges who had held positions of high political profile prior to their appointment to the bench—U.S. Senator or U.S. Representative, or positions in the Executive Branch requiring Senate confirmation.

See id. at 1720 n.11.

Edwards, supra note 1, at 1347–48.

Two judicial almanacs were searched: The American Bench: Judges of the Nation (7th ed. 1993–94) and 2 Almanac of the Federal Judiciary (1998).

In the Second Circuit, Judge John M. Walker, Jr., had been an Assistant Secretary of the Treasury. In the Fourth Circuit, Judge Donald Russell had been (briefly) a member of the U.S. Senate and Judge J. Michael Luttig had been an Assistant Attorney General. In the Sixth Circuit, Judge Danny J. Boggs had been a Deputy Secretary of Energy. In the Seventh Circuit, Judge Walter J. Cummings had been the Solicitor General of the United States. In the Ninth Circuit, Judge Charles E. Wiggins had
To facilitate comparison, the D.C. Circuit data includes all the active judges, not just the nine judges who were part of my sample. Outside the D.C. Circuit only eight out of 158 judges (5.1%) had held such positions, as compared with a percentage almost ten times as high in the D.C. Circuit.

Table I: Political Profile of Federal Circuit Judges (as of December 31, 1993)

<table>
<thead>
<tr>
<th>Circuit</th>
<th>Number of Active Judges</th>
<th>Number of Judges with High Political Profile</th>
<th>Percentage of Judges with High Political Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>10</td>
<td>5</td>
<td>50.0</td>
</tr>
<tr>
<td>First</td>
<td>6</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Second</td>
<td>10</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Third</td>
<td>12</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fourth</td>
<td>13</td>
<td>2</td>
<td>15.3</td>
</tr>
<tr>
<td>Fifth</td>
<td>13</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sixth</td>
<td>15</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Seventh</td>
<td>11</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>Eighth</td>
<td>10</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Ninth</td>
<td>26</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td>Tenth</td>
<td>10</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Eleventh</td>
<td>11</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Federal</td>
<td>11</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>158</td>
<td>13</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Chief Judge Edwards next criticizes me because, he says, I “never explain[] why the supposed high political profile of the D.C. Circuit, even if it were established fact, would ensure a close connection between the ideology of an appointing President and the

been a member of the U.S. House of Representatives and Judge Stephen S. Trott had been the Associate Attorney General. In the Federal Circuit, Judge Glenn L. Archer, Jr., had been an Assistant Attorney General.

The table does not include former U.S. Attorneys, members of state legislatures, or state Attorneys General because these positions are less salient at the national level. Of all the judges on active duty nationwide on December 31, 1993, eight, five, and one, respectively, had served in these positions.

112 See supra notes 9–11 and accompanying text (explaining how the sample was constructed).
ideology of an individual judge.” He then notes that “numerous Supreme Court Justices, past and present, have famously disappointed the parties of the Presidents who appointed them by their independence and unpredictability.”

This criticism conflates two different issues. The first concerns the choice of proxy for a judge’s ideology. As already stated, I used the party of the appointing President as such a proxy simply because it is the generally accepted technique.

The second issue, however, concerns whether judges in fact vote consistently with the ideology assumed from the proxy. That question is not an assumption of my study, but rather, it is what the study seeks empirically to determine. To ask the question whether a judge’s ideology affects her votes is not to answer it. The answer, instead, is given by the empirical estimations in my article. With respect to this issue, to use Chief Judge Edwards’ own terminology, the proof, indeed, “lies in the pudding.”

Chief Judge Edwards also objects to my suggestion that “D.C. Circuit judges might actually be more likely to vote in accordance with ‘ideology’ than other appellate judges.” My claim with respect to this issue was presented as part of a “cautionary note,” urging readers not to generalize from the experience of the D.C. Circuit. Since I studied only the D.C. Circuit, I thought that it would be unfortunate if casual readers extrapolated from my study to reach conclusions about how other circuits treat environmental cases.

One of the reasons that I offered for this speculation concerned the disproportionate number of D.C. Circuit judges who have been nominated to the Supreme Court in recent years and who “may try to vote consistently with the wishes of their party as a way to improve their chances of nomination.” I did not say that such strategic voting in fact took place. As my article makes clear, this issue was not one that I analyzed empirically. My speculation, however, is supported by a literature that deals with how judges, both in the

113 Edwards, supra note 1, at 1348.
114 Id.
115 See supra notes 102–06 and accompanying text.
116 Edwards, supra note 1, at 1349.
117 Id. at 1348.
118 Revesz, supra note 2, at 1720.
119 Id.
United States and abroad, might be motivated by a desire for career advancement within the judiciary. While the literature is controversial, it would have been wrong for me not to note the issue in cautioning readers about the limits of the study. 

In any event, very little turns on this issue. Chief Judge Edwards is simply mistaken in suggesting, on the basis of this point, that “the cornerstone of [my] study is at stake.” All that is at stake is a suggestion about why my study’s results might not generalize to other courts of appeals.

Finally, Chief Judge Edwards objects to my use of “[t]he term ‘ideology’” because “in cases challenging agency action as arbitrary and capricious (Revesz’s so-called ‘procedural challenges’), the court serves only as a check on the reasonableness and procedural adequacy of agency action.” He notes that “‘ideology’ conjures up an image of judges definitively deciding the course of future events by their decisions; but in the agency cases Revesz actually discusses, the policy determination always continues to rest with the agency.”

Chief Judge Edwards is, of course, right that when a court sets aside an agency decision on procedural grounds, the remedy is a remand back to the agency for the agency to figure out what to do next. Such remands, however, are not inconsequential. As noted earlier, they can lead to major modifications of the agency policy, long delays during which the policy is not enforced, or outright abandonment of the policy as a result of changes in the political climate or economic conditions.

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121 Edwards, supra note 1, at 1349.
122 Id.
123 Id.
124 See Schuck & Elliott, supra note 77, at 1043–54; supra notes 76–80 and accompanying text.
E. Incomplete Specification of the Model

Chief Judge Edwards complains that my study suffers from “omitted variable bias.” He explains that this problem arises when “factors which are correlated with the variables studied, but are not included in a study’s analytic framework, actually explain the data better than do the factors considered by the investigator.” Chief Judge Edwards argues that there is a “meaningful possibility that omitted explanatory factors, correlated with but different from the party of the appointing President, produced the outcomes that Revesz found.” In this regard, Chief Judge Edwards is particularly critical of my univariate analysis.

1. Omitted Variables

Chief Judge Edwards suggests several variables that I could have examined: “the age of the judge,” “the judge’s past job experience,” “the judge’s years of experience on the bench,” “the party of the President in office when the agency decision was made,” and “the usual background demographic and socio-economic factors.” He also complains that, with respect to one of the variables that I did consider—the arguments raised in the petition for review of administrative action—I did not “attempt to consider a more refined version of . . . the types of arguments proffered (i.e., claims that the EPA failed to explain its reasoning, or failed to respond to comments, or provided a reason that was logically incoherent).”

Criticism about omitted variables can be leveled against every empirical study ever performed. There are always other variables that could be included in estimations. One of the most important judgments that empirical researchers must make is to determine which variables to use. One must be somewhat parsimonious in this endeavor because the number of independent variables that

125 Edwards, supra note 1, at 1350.
126 Id.
127 Id. at 1351.
128 Id.
129 Id. at 1352.
can be included in the model is limited by the size of the sample: the larger the sample, the greater the possible number of variables.\textsuperscript{130}

In good empirical analyses, the choice of independent variables is dictated by the theories that one wishes to examine and the hypotheses that those theories generate. One does not pick independent variables at random to see whether their variation might make any difference. Instead, one begins with a theory; one formulates specific hypotheses on the basis of that theory; and then one chooses the independent variables that are needed to examine these hypotheses.

In my article, I wanted to examine two contrasting theories of the judicial function. Positive political economy theories posit that judges act in a political environment, and that the ideology that they bring to the bench has a central influence on their decisions (a judgment they share with the legal realists of an earlier era).\textsuperscript{131} In contrast, legal theories that emphasize the relative autonomy of legal reasoning, such as legal process theories, assert that decisions are determined by the facts of individual cases and the nature of legal precedents.\textsuperscript{132} To test these different theoretical positions on the nature of adjudication, one must look at the impact of ideology, or of a proxy for ideology, on judicial votes.

Similarly, I wanted to test various theories that have been offered about how multijudge courts function.\textsuperscript{133} The critical question here is whether the presence and identity of colleagues affects a judge’s vote.

There also is a theoretical debate concerning whether the nature of legal arguments presented to the court matters. Many positive political economy theorists appear to believe that judges will reach


\textsuperscript{133} See Revesz, supra note 2, at 1732 n.45.
the “bottom line” result they favor on policy grounds regardless of the strength of the arguments presented to them and, as a result, have not devoted much attention to this question. In contrast, for legal process theorists, the nature of the arguments presented to the court is vitally important. My specific interest was to determine whether any effect that ideology might have upon a judge’s vote differed for two types of arguments commonly presented in challenges to environmental regulations: statutory arguments, in which there are reasonably well articulated legal standards and substantial oversight by the Supreme Court, and procedural arguments, in which the governing legal principles are quite amorphous and Supreme Court intervention has been more rare.134

In addition to the independent variables that are necessary in order to test particular theories, a well-designed empirical study also needs to include other independent variables that might be expected to explain the variation in the dependent variable (in this case, the variation in judicial votes). With respect to the variables that Chief Judge Edwards would have liked me to include, a large number of empirical studies, conducted over several decades, concluded, almost without exception, that demographic and socio-economic factors, age, prior experience, and length of service do not have a statistically significant effect on judicial votes.135 Thus, there was no reason to include them in my study. In addition, I stated in my article that my sample “was too small to allow the study of the impact that a judge’s demographic characteristics such as race, gender, religion, age, socio-economic status, prior employment, and length of tenure have on a judge’s decision.”136

As indicated above, Chief Judge Edwards also would have liked me to include in my empirical analysis a variable for the party of the President in office when the agency decision was made.137 He notes that this factor is “hardly insignificant for a study that pur-
ports to address ‘ideological’ bias.” My article acknowledges this point, but explains why this variable could not be used:

[T]he identity of the administration that promulgated the challenged regulation might affect voting behavior. It could be that, other things being equal, Republican judges are more likely to uphold EPA decisions of Republican administrations and Democratic judges are more likely to uphold EPA decisions of Democratic administrations. Unfortunately, for all the periods studied, the number of regulations promulgated by a Democratic administration was too small to permit a statistical analysis. In particular, Republican administrations were in office for almost the full length of the periods spanning the mid-1980s through the early 1990s, when ideological voting was most pronounced.

Thus, Chief Judge Edwards merely restates my own claim—that it would be worthwhile to study this variable—but does not attempt any response to my explanation of why this cannot be done with the data set that I was interested in examining. As it turned out, however, because essentially all the regulations in the sample were promulgated by Republican administrations, the party of the President in office at the time that the agency action was taken cannot explain the variation in judicial votes. Accordingly, there is no “omitted variable” problem with respect to this variable.

Finally, with respect to Chief Judge Edwards’ suggestion that I could have studied a “more refined” version of the arguments proffered by the challengers, the number of challenges presenting each of the specific objections contained in my procedural category was too small to permit meaningful analysis. Thus, aggregation was necessary.

More generally, choosing the variables for an empirical analysis is not an exact science. There is an almost unlimited number of variables to choose from, but there are limits on how many can be used for a given data set. A critic who wants to take issue with an empirical study bears some burden to explain, on the basis of theory or prior empirical examination, why an omitted variable is likely to be important.

138 Edwards, supra note 1, at 1351.
139 Revesz, supra note 2, at 1735.
140 See supra note 129 and accompanying text.
Chief Judge Edwards has not done so. The variables that he mentions have either been uniformly rejected as insignificant in the prior literature (e.g., demographic characteristics of the judges), cannot possibly explain the variation in the dependent variable because of their own lack of variation (e.g., identity of the administration that promulgated the regulations), or occur too infrequently to be studied with the data set that I employed (e.g., the different components included under the rubric of procedural challenges).

2. Univariate Analysis

Chief Judge Edwards singles out for particular criticism my presentation of the results of the univariate analysis, where, by definition, all independent variables except one are omitted. He states: “Because . . . univariate analysis tells us little, it follows that Revesz’s broad conclusions are unwarranted.” 141 That is a curious charge for Chief Judge Edwards to level because he himself has made broad pronouncements about the nature of ideological divisions on the D.C. Circuit (in a study that I discuss in more detail below142) on the basis of univariate analysis, without acknowledging any problems with this technique.143

In any event, my article is quite explicit about the limitations of univariate analysis:

[U]nivariate analysis might produce misleading results if the different variables affecting judicial votes are not independent, so that a change in one variable is accompanied by changes in other variables. Thus, the multivariate analysis undertaken here isolates the effects of changes in one variable when all other variables are held constant.144

Indeed, the multivariate analysis in my article shows that the univariate analysis substantially understates the impact of ideology on judicial decisionmaking:

141 Edwards, supra note 1, at 1352.
142 See infra notes 154–57, 202–05 and accompanying text.
144 Revesz, supra note 2, at 1756–57.
This study’s findings on the effects of panel composition explain why the multivariate analysis reveals more marked ideological voting. The findings show, quite strongly, that Democratic judges “vote as Democrats” only when there are at least two Democrats on the panel, and that similarly, Republican judges “vote as Republicans” only when there are at least two Republicans on the panel. . . . The univariate analysis understates the extent of ideological voting by not separating the cases in which Republican judges vote as Republicans (because they are in the majority on the panel) from those in which Republican judges vote as Democrats (because they are the sole Republican on the panel).  

Thus, Chief Judge Edwards is wrong in criticizing me for making claims about ideological voting based on the univariate analysis. My multivariate analysis shows that in fact ideological voting is more prevalent than the univariate analysis suggests.

F. Deliberation and Dissents

My article shows, for the sample of industry challenges in the periods spanning the mid-1980s through the early 1990s, that a judge’s vote is significantly influenced by the ideologies of the two other judges on the panel.  

I indicated that this result could be consistent with either a “deliberation hypothesis,” under which judges modify their views because they “take seriously the views of their colleagues,” or a “dissent hypothesis,” under which “a judge who sits with two colleagues from the other party moderates his or her views in order to avoid having to write a dissent.”  

The dissent hypothesis implies that the single judge of one party is the only one to moderate her views (in order to avoid writing a dissent), but the two judges of the other party vote no differently than if the third judge was of their same party. In contrast, the deliberation hypothesis implies that not only the single judge of one party but also the two judges of the other party moderate their views. Thus, two judges of the same party vote differently when

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145 Id. at 1765–66.
146 See id. at 1751–56, 1760; supra notes 19–20 and accompanying text.
147 Revesz, supra note 2, at 1732–33.
they sit with a judge of the other party than they do if the third judge is of their same party.

As indicated above, my article shows strong panel composition effects: In the case of industry challenges, a judge’s votes were significantly affected by the identity of the two other judges on the panel.146 I was not convinced, however, that the data in my article supported a strong conclusion as to whether these effects derived from the dissent hypothesis or the deliberation hypothesis: “[T]here is somewhat more support for the deliberation hypothesis among Republicans than among Democrats, and somewhat more support for the dissent hypothesis among Democrats than among Republicans. Because the statistically significant results occur only in some of the periods, however, this conclusion should be regarded as only tentative.”149

In contrast, Chief Judge Edwards is quite certain that my data supports the deliberation hypothesis but disproves the dissent hypothesis. He explains:

“[D]eliberation” might easily include the tendency for two judges who see a case the same way to try to bring the third judge to see the case their way. The two judges might be less inclined to see the third judge’s opinion as convincing. This would produce an effect in which deliberation led to more moderation of the views of a judge inclined to dissent than of a judge safely in the majority: but the effect would be an artifact of deliberation, not of fear of dissent.150

Chief Judge Edwards confuses two concepts: whether the difference between two reversal rates is statistically significant and what the magnitude of that difference is. It might well be that two judges of one party have a greater effect on a third judge of the other party than vice versa: in other words, that the magnitude of the impact of two judges on one judge is greater than the magnitude of the impact of one judge on two judges. But if the single judge has an effect on the other two, there should be a statistically significant difference between the reversal rates of a judge who sits with only one colleague of the same party and of a judge who sits

146 See id. at 1751–56, 1759; supra notes 19–20 and accompanying text.
149 Revesz, supra note 2, at 1756.
150 Edwards, supra note 1, at 1354.
with two colleagues of the same party. Whereas the judge in the mixed panel can be influenced by the views of the judge of the other party, the judge in the homogeneous panel would not be subjected to this potentially moderating influence. Thus, Chief Judge Edwards has no basis for asserting that my data supports the deliberation hypothesis but not the dissent hypothesis.

III. CHIEF JUDGE EDWARDS’ ACCOUNT OF DECISIONMAKING ON THE D.C. CIRCUIT

After criticizing my methodology, Chief Judge Edwards proceeds to offer his own views about how the D.C. Circuit conducts its business. There are three principal components to his argument. First, he maintains that the low dissent rate on the D.C. Circuit, particularly the low dissent rate on panels with both Democratic and Republican judges, provides conclusive evidence that ideology does not motivate the judges’ votes.\(^{151}\) Second, quite at odds with the first claim, he maintains that the party split on procedural challenges identified in my article is understandable given the nature of the legal issues raised by such challenges and, moreover, that it is a desirable phenomenon.\(^{152}\) Third, he explains that the D.C. Circuit is a collegial court characterized by an attitude of respect among the judges.\(^{153}\) I address each claim in turn.

A. Significance of the Dissent Rate

In an article published in 1985, Chief Judge Edwards concluded, on the basis of empirical examination, that there was no “ideological gulf” dividing judges on the D.C. Circuit.\(^{154}\) His methodology consisted of dividing the D.C. Circuit judges into a “liberal” camp and a “conservative” camp and examining the dissent rate in cases in which the panel contains at least one judge from each camp.\(^{155}\) He found that, in such mixed panels, “[i]n less than 10 percent of these cases was there a dissent filed by the allegedly ‘conservative’

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\(^{151}\) See Edwards, supra note 1, at 1359.

\(^{152}\) See id. at 1362–63.

\(^{153}\) See id. at 1364.

\(^{154}\) Edwards, Public Misperceptions, supra note 143, at 630.

\(^{155}\) See id. at 630, 643; infra note 204 (explaining that Chief Judge Edwards’ study and my study use essentially the same proxy for ideology).
or ‘liberal’ judge who was in the political minority on the panel.”

As further support for his conclusion, he adduced the low dissent rate on the D.C. Circuit, noting that “in only 13% of the cases decided with a full opinion was there a dissent.”

In my article, I raised a serious criticism against the methodology used by Chief Judge Edwards in his piece (as well as by his colleague, Judge Patricia M. Wald, in a separate article). I noted that his approach ignored the effects on a judge’s vote of the identity (and ideology) of the judge’s colleagues on the panel.

For example, in framing the hypotheses of my study, I observed, consistent with the “dissent” hypothesis, that “it may be that a panel of one ‘liberal’ and two ‘conservative’ judges would rule one way on a case and that a panel of two ‘liberal’ and one ‘conservative’ judge would unanimously rule the opposite way.”

The multivariate analysis for industry challenges raising procedural arguments for the 1986–93 period strongly confirmed this hypothesis. The reversal rate for panels with two Democrats and one Republican was startlingly different from the reversal rate for panels with two Republicans and one Democrat. I explained further that the statistical analysis shows that, for these cases, “Democratic judges ‘vote as Democrats’ only when there are at least two Democrats on the panel, and that similarly, Republican judges ‘vote as Republicans’ only when there are at least two Republicans on the panel.”

In the conclusion, I underscored the flaws with the methodology used by Chief Judge Edwards in his 1985 article. Referring to his article and that of Judge Wald, I stated:

156 Edwards, Public Misperceptions, supra note 143, at 630.
157 Id.
159 See Revesz, supra note 2, at 1733–34 n.48, 1771–72.
160 See supra notes 146–47 and accompanying text.
161 Revesz, supra note 2, at 1734 n.48.
162 See id. at 1763; supra notes 20–21 and accompanying text. In examining the role of panel composition in the multivariate analysis, I also found that a judge’s vote was significantly affected by the identity of her colleagues. See Revesz, supra note 2, at 1751–56.
163 Id. at 1765–66.
[O]ther studies conclude, from the large proportion of unanimous decisions in cases decided by judges of different ideologies, that ideology does not play an important role in judicial decisionmaking. Such studies, however, do not consider panel composition effects: Although a panel with two Democrats and one Republican might vote unanimously to set aside a regulation challenged by an environmental group, a panel with two Republicans and one Democrat would vote, also unanimously, to uphold the same regulation.\textsuperscript{164}

Thus, there could be a great deal of ideological voting even if there were no dissents.

In his response to my article, Chief Judge Edwards repeats the claims he made in 1985, arguing that the low rate of dissents is evidence of the lack of ideological voting.\textsuperscript{165} He does not acknowledge or respond to my detailed explanations for why such a conclusion is the product of a methodological flaw. Quite to the contrary, he views the low dissent rate as such compelling evidence of the lack of ideological voting that he claims to be “astonished” that I would seek to even test contrary hypotheses.\textsuperscript{166} He states, moreover, that I “do not squarely confront this phenomenon, but instead seem determined to explain away this consistent pattern of consensus,” attributing my behavior to an “evasive impulse.”\textsuperscript{167} Chief Judge Edwards appears not to understand that while the low dissent rate might be a necessary condition to support a conclusion of no ideological voting, it is not a sufficient condition. Indeed, if panels with two Democrats and a Republican consistently decide a particular case in the opposite way than would panels with two Republicans and one Democrat, there is ideological voting even if all the panels are unanimous.

In a related vein, Chief Judge Edwards says that I am “in the uncomfortable position of saying that the D.C. Circuit is both too ideological and somehow not ideological enough: at once impelled by dogmatic personal ideology and by strategic suppression of ideology in favor of avoiding dissent.”\textsuperscript{168} There is nothing “uncom-

\textsuperscript{164} Id. at 1771–72.
\textsuperscript{165} See Edwards, supra note 1, at 1360.
\textsuperscript{166} Id. at 1359.
\textsuperscript{167} Id. at 1360.
\textsuperscript{168} Id.
fortable,” however, about my position. The results reported in my article are a function of the effects of panel composition: A judge’s vote is affected by the identity of her colleagues such that the ideology of the majority of the panel prevails and the ideology of the remaining member is, indeed, suppressed.

Chief Judge Edwards expresses disbelief that such a course of action is even possible: “I am not sure how we judges could effectively hide our views, given our obligation to explain our reasons in a public way.” Chief Judge Edwards’ shock over the suggestion that judges suppress dissents is not shared by at least one other leader of the federal appellate bench. In his study of judicial motivation, Chief Judge Richard Posner sought to explain a range of common judicial practices, including what he described as “go-along voting”—voting with the majority to avoid writing a dissenting opinion. For Chief Judge Posner, suppressing dissents is obviously not as implausible a phenomenon as it is for Chief Judge Edwards.

More generally, it is not clear that Chief Judge Edwards is correct in suggesting that suppressing dissents is necessarily an impermissible or even an undesirable practice. In many judicial systems, multi-member courts file a single opinion, and dissents are either not permitted or are practically unheard of. These practices are generally justified by considerations of predictability to future litigants. Presumably, they also further judicial economy as well as collegiality.

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169 Id.
170 Posner, supra note 120, at 2, 20.
172 See Ijaz Hussain, Dissenting and Separate Opinions at the World Court 263 (1984); Levmore, supra note 171, at 2220 n.47.
In summary, Chief Judge Edwards’ reference to the low dissent rate in the D.C. Circuit does not provide credible support for his claims about the lack of ideological voting. He merely relies on the same flawed methodology that he used in his 1985 article and does not attempt to respond to the criticisms of this methodology raised in my article.

B. Ideological Divisions Over Procedural Challenges

Despite his strong insistence that the low dissent rate implies no ideological divisions, Chief Judge Edwards in fact attempts to justify my finding that ideology affects votes on procedural challenges. He states: “It follows that our experiences and our views will find more room for expression in this context than they do in the very constrained context of pure legal questions.”\(^{173}\)

Chief Judge Edwards gives several reasons for his view. He claims that in procedural cases, judges must “make sense of policy matters that are often complex and on which reasonable minds can differ”; that such cases involve “more ‘judgment calls’ than does review of questions of pure law”; that “the differing backgrounds and attitudes of judges are likely to express themselves more than they would in the context of purely legal questions”; that “understanding and parsing policy is, whether we like it or not, a task affected by one’s experiences and ideas”; that “the determination as to whether an agency’s action is arbitrary and capricious does not always admit of any easy answer”; that the “legal strictures” defined by the Supreme Court “are more jurisprudential guide-posts than strict rules of law”; and that “the large body of D.C. Circuit precedent in the area of administrative law generally does not constrain and mandate a certain conclusion in ‘procedural challenges,’ but only points to analogies with the case under review.”\(^{174}\)

Moreover, Chief Judge Edwards argues that “the relative influence of background and perspectives on cases involving ‘procedural challenges’ is a good thing, not a bad one.”\(^{175}\) He suggests that this result is, in fact, part of the congressional design vesting

\(^{173}\) Edwards, supra note 1, at 1363.

\(^{174}\) Id. at 1362–63.

\(^{175}\) Id.
exclusive venue over important administrative law matters in the D.C. Circuit. As Chief Judge Edwards explains:

When Congress gave the D.C. Circuit the special authority to review a huge fare of administrative cases under the Administrative Procedure Act, it knew full well that it was not creating jurisdiction for just another set of purely legal cases. Congress was assigning to the court a special review function, and thereby giving the court an integral role in the Administrative Procedure Act’s dynamic structure of rule making. In this review function, the court needs to rely to some extent on its own commonsense understanding of the world. Because understandings and perspectives differ, it is valuable for these different perspectives to inform our assessment of the logic of agency decisions.\textsuperscript{176}

It would be reasonable to wonder, at this point, why Chief Judge Edwards is casting his piece as a criticism of my findings. After all, my study found that ideology explains judicial outcomes only with respect to procedural challenges. It reported this result in a neutral way, without either applauding or criticizing the D.C. Circuit for this practice. Chief Judge Edwards says that this result is both understandable and desirable.\textsuperscript{177} Moreover, we even agree on a possible cause: that the caselaw in the area of procedural challenges is less constraining of the discretion of judges than the caselaw governing other challenges to EPA decisions.\textsuperscript{178} On these central issues, nothing seems to separate us.

I part company, however, with Chief Judge Edwards’ suggestion that the difficult nature of cases raising procedural challenges—in his words, that these cases do “not always admit of an easy answer”\textsuperscript{179}—account for the ideological division. This claim seems coextensive with an argument that Chief Judge Edwards made in a

\textsuperscript{176} Id.

\textsuperscript{177} See id. at 1363–64.

\textsuperscript{178} See id. at 1362–63, 1368; Revesz, supra note 2, at 1729–32. Chief Judge Edwards says that I “reject this possibility out of hand, though, by simply asserting that statutory cases might be just as ‘malleable.’” Edwards, supra note 1, at 1368. My article makes clear, however, that I do not reject the view that the caselaw with respect to procedural challenges is less constraining. It states that “my study does not seek to distinguish between . . . two explanations”: the malleability of the caselaw governing procedural challenges and the lack of Supreme Court review in these cases. See Revesz, supra note 2, at 1732.

\textsuperscript{179} Edwards, supra note 1, at 1363.
prior article that the political views of judges are most likely to affect their decisions in “very hard” cases. In that article, he defined the category as follows: “The category of ‘very hard’ cases includes, for example, many issues of constitutional law and justiciability. Such issues require judges to consider basic questions of individual rights and the limits of government, the distribution of power among the three branches, and the proper role of the federal judiciary.” Such cases, Chief Judge Edwards says, involve “controversial and complex theories of moral and social philosophy,” and “implicate ultimate values.” As an example, he cites the D.C. Circuit’s decision in *Dronenburg v. Zech,* “upholding the Navy’s policy of mandatory discharge for homosexual conduct.”

The types of procedural challenges analyzed in my article simply do not fit this category of “very hard” cases. Questions such as whether the agency responded appropriately to comments in the context of notice-and-comment rulemaking—one of the staples of procedural challenges—are not the type of paradigmatic “very hard” case that Chief Judge Edwards discussed in his prior article.

Indeed, to the extent that these cases deal with jurisprudentially weighty matters, it is because they implicate the relative balance of authority between the agency and its reviewing court. It is quite possible that different judges would have different views about how thorough an agency’s response to a particular public comment in rulemaking needs to be. Considerations of administrative efficiency, comparative institutional competence, and legislative and constitutional design would be relevant to that assessment. One might expect, for example, that Republican judges would be more deferential to the decisions of the political branches of government.

My article, however, tested this hypothesis, but the results were not statistically significant. Instead, what determines the degree of

180 See Edwards, Public Misperceptions, supra note 143, at 632.
181 Id.
182 Id. (quoting Kent Greenawalt, Discretion and Judicial Decision: The Elusive Quest for the Fetters that Bind Judges, 75 Colum. L. Rev. 359, 377 (1975)).
183 Edwards, Public Misperceptions, supra note 143, at 633.
184 741 F.2d 1388 (D.C. Cir. 1984).
185 Edwards, Public Misperceptions, supra note 143, at 632–33.
186 See supra note 95 and accompanying text.
187 See Revesz, supra note 2, at 1728.
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deference is the identity of the challenger—whether it is an industry group seeking laxer regulation or an environmental group seeking more stringent regulation. Chief Judge Edwards’ theory concerning “very hard” cases cannot explain why, for example, Democrats consistently defer more to the EPA than Republicans when the claim of inadequate response to comments by the EPA is raised by industry challengers and why Republicans defer more than Democrats when the same claim is raised by environmental challengers. On the other hand, ideology—the propensity for whatever reason to favor a particular interest for other than jurisprudential reasons—does provide a plausible explanation for these voting differences. Indeed, even Chief Judge Edwards says that “[i]t sounds like ‘ideology’ to say that one person (or party) is pro-industry, and another pro-environment.”

The fact remains, however, that Chief Judge Edwards does not take serious issue with my finding that in procedural cases the background and outlook of the judges (what I call their ideology) have an impact on their vote. It would appear, therefore, that on the critical finding of my study, we are essentially in agreement.

C. Collegiality

Chief Judge Edwards also argues that the D.C. Circuit is a collegial court. He explains: “[C]ollegiality does not mean universal consensus, nor should it. Collegiality means only that we discuss each other’s views seriously and respectfully, and that we listen with open minds. That modest goal I think we achieve nearly all the time.” According to Chief Judge Edwards, as a result of such collegial deliberations, judges sometimes change their views with respect to a case.

188 See supra notes 16–18 and accompanying text.
189 Edwards, supra note 1, at 1349. Partly in reaction to my study, Judge Wald offers an “explanation for judges’ supposed tendency to vote their preferences more strongly in process cases.” Wald, supra note 38, at 249. Consistent with an ideological approach to judging, Judge Wald explains that it “may be that where judges react instinctively against an agency result, they will more closely scrutinize the procedures of the agency which gave rise to the controversial decision.” Id.
190 Edwards, supra note 1, at 1361.
191 See id.
Nothing that Chief Judge Edwards says about collegiality contradicts anything in my article. My study did not seek to determine whether judges on the D.C. Circuit are courteous or respectful with one another, and I made no representations on this matter. I did find that in certain cases, ideology significantly influenced judicial votes. But disagreement, even disagreement motivated by ideology, is not inconsistent with respectful treatment. Moreover, Chief Judge Edwards’ assertion that judges sometimes change their minds during their deliberations is fully consistent with my “deliberation” hypothesis—a hypothesis that is at least partly supported by the data.  

IV. EMPIRICAL STUDIES OF JUDICIAL DECISIONS

Chief Judge Edwards indicates that my article and its research methodology “raise grave doubts about the viability of a type of inquiry into judicial decision making that has come to be called ‘law and positive political theory.’”  

Chief Judge Edwards explains at some length that “judges’ views on how they decide cases should be relevant to understanding how judges in fact decide cases.”  

Referring to his prior work, Chief Judge Edwards stresses that “members of the federal judiciary strive, most often successfully, to decide cases in accord with the law rather than with their own ideological or partisan preferences,” and that “it is the law—and not the personal politics of individual judges—that controls judicial decision-making in most cases resolved by the court of appeals.”  

In indicting a large field of academic inquiry in political science and law, Chief Judge Edwards conflates two different strands of academic work. Theoretical works on the positive political economy of adjudication posit that judges are strategic actors who seek to maximize an objective function that is generally defined by their policy preferences. In contrast, empirical works seek to test whether

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192 See Revesz, supra note 2, at 1756.
193 Edwards, supra note 1, at 1338.
194 Id. at 1364.
196 Id. at 1365 (quoting Edwards, Public Misperceptions, supra note 143, at 620).
such theoretical accounts are in fact plausible. My article is in the latter genre.

Chief Judge Edwards is right to insist that his views ought to be taken into account by academics who develop theoretical models of the positive political economy of adjudication that are at odds with his characterization. To the extent that such theorists do not grapple with accounts such as those advanced by Chief Judge Edwards, his criticism is valid.

But Chief Judge Edwards is not on firm ground when he applies this argument to criticize empirical studies such as mine. Indeed, a central purpose of my study was to determine whether characterizations of the judicial function such as those of Chief Judge Edwards are closer to reality than characterizations advanced in the literature on the positive political economy of adjudication. Surely Chief Judge Edwards cannot expect that his statements should be taken as unquestionably true and not subjected to empirical examination.

Any social scientist would be concerned with the fact that Chief Judge Edwards is not a neutral observer but instead one of the subjects of the analysis, and that he thus faces strong institutional pressures to give a particular account of the work of his court. Moreover, even if Chief Judge Edwards is accurately reporting his perceptions, one must worry about whether those perceptions are in fact an accurate portrayal of the work of his court. It is important to stress that I am not attributing any improper motive to Chief Judge Edwards or in any way casting doubt on his account (other than doubts that arise as a result of the findings of my empirical study). I am simply making the point, which ought to be uncontroversial, that when leaders tell the public that their institutions function well and that the views of potential critics should be disregarded, skepticism and empirical testing are appropriate. Chief Judge Edwards may recognize as much: “[I]f our public votes shed light on how we do our jobs, then it is perfectly legitimate for academics to collate and discuss those votes.”

Chief Judge Edwards seems to object to such inquiry, however, if it involves the empirical analysis of a variable denoting a judge’s ideology (in my case, a proxy for ideology defined by the party of

197 Edwards, supra note 1, at 1369.
the President who appointed the judge). Such a position is profoundly mistaken.

Including ideology as an independent variable in a statistical estimation of the determinants of judicial votes is not tantamount to finding that ideology affects such votes. Quite to the contrary, what one tests is the null hypothesis that ideology has no effect on how judges dispose of cases. Moreover, convention dictates that, in order to find that ideology has a statistically significant effect, one needs to overcome a significant hurdle.

Because differences in votes between judges of different ideologies might arise from random variations rather than from ideological differences, it is standard not to report that an independent variable is statistically significant unless the degree of certainty that this variable is responsible for the variation in the dependent variable is quite high—generally, at least 90%. Thus, even if it is more likely than not that the variation in the dependent variable is explained by differences in the independent variable, or even if one has a 75%, or for that matter 89%, level of certainty that the independent variable—in this case, ideology—explains the differences in votes, it is standard to report that the effect is not statistically significant. Thus, contrary to what Chief Judge Edwards appears to believe, including ideology as an independent variable in a statistical estimation is not stacking the decks against his view of principled, nonideological decisionmaking. Instead, such an approach is equivalent to giving his view the benefit of the doubt over a broad range of uncertainty.

Moreover, it is simply not possible to perform a credible empirical study of judicial votes without including an independent variable that is a proxy for ideology. Given the large numbers of studies showing that judicial ideology does matter (and even if these studies do not all employ a flawless methodology), any empirical examination that did not include such a variable would be immediately discredited as a result of “omitted variable” bias—a criticism that Chief

198 See supra notes 12–13 and accompanying text (finding little ideological voting in the 1970s).

199 In all my estimations, I indicated whether the variables were significant at a 90%, 95%, and 99% confidence levels. See Revesz, supra note 2, at 1742, 1745, 1746, 1748, 1750, 1752, 1754, 1758.

200 See id. at 1722–23 n.18 (collecting sources); supra note 103 and accompanying text.
Judge Edwards himself invokes against me with respect to other variables. If an independent variable measuring ideology were not used, any result one obtained would be open to the serious criticism that, to use Chief Judge Edwards’ words, ideology “explain[s] the data better than do the factors considered by the investigator.” Such a study would be quite unlikely to survive the peer review process in any respectable academic journal. But I stress, once again, that the use of such an independent variable in an empirical examination of judicial votes in no way skews the analysis against the views of adjudication that Chief Judge Edwards espouses.

It is also relevant to note that Chief Judge Edwards himself has attempted to ascertain whether the ideology of judges affects their votes. His empirical study of the dissent rate on the D.C. Circuit, which is discussed above, attributed either liberal or conservative ideology to each of the judges and then looked at whether ideological divisions on panels resulted in divided votes. If performing such studies is an acceptable enterprise when the results come out one way (as they did for Chief Judge Edwards, though as a result of his methodological errors), the same enterprise must also be acceptable when the results are different (as was the case with my study).

In his reply to my article, Chief Judge Edwards seems to express a preference for more qualitative studies, which rely on extensive interviews, over the exclusively quantitative study that I performed. I have no doubt that qualitative studies, if properly conducted, can add to our understanding of the work of the courts. But no single methodological approach should have an exclusive claim to validity. A diversity of approaches is likely to be most ef-

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201 See supra notes 141–43 and accompanying text.
202 Edwards, supra note 1, at 1350.
203 See supra notes 154–57 and accompanying text.
204 See Edwards, Public Misperceptions, supra note 143, at 643. All the judges in my sample for the periods spanning the mid-1980s through the early 1990s categorized as liberal by Chief Judge Edwards were appointed by Democratic Presidents; conversely, all the judges in my sample categorized as conservative by Chief Judge Edwards were appointed by Republican Presidents. See id.; Revesz, supra note 2, at 1726. Thus, in practice, we used the same proxy for ideology.
205 See supra notes 154–68 and accompanying text.
206 See Edwards, supra note 1, at 1367.
fective at furthering a sophisticated understanding of how courts decide cases.

Perhaps Chief Judge Edwards believes that the benefits that might come from empirical examinations of the impact of ideology on judicial decisionmaking are outweighed by the costs such studies might impose if they create public unease about the work of the federal judiciary. Such a view, however, is not persuasive. 207

The federal courts are an enormously important institution, and public understanding of how they wield their power is crucial in a democracy. Moreover, a robust empirical literature in this area can, over time, lead to public policy prescriptions concerning the place of the judiciary in the administrative lawmaking process. For example, as I explained in my article, the extent of ideological division on the D.C. Circuit over procedural challenges is relevant to debates about the benefits of “hard look” review of administrative action, the role that the Supreme Court should play in supervising the work of the courts of appeals in this area, and the desirability of vesting the D.C. Circuit with exclusive venue under important regulatory programs, 208 as well as the design of judicial review provisions in federal statutes.

A more subtle benefit might also flow from empirical studies of the role of ideology on judicial decisionmaking. By exposing what may be unconscious biases, 209 such studies may have the effect of narrowing the apparent gap between judges’ perceptions of how they carry out their work and the reality of their output.

There already are many impressionistic accounts, which may be affecting public perceptions, suggesting that the D.C. Circuit de-

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207 The federal judiciary is unlikely to be the only institution that might want to claim the privilege of not having publicly available data used to study it in certain ways. I have the strong sense that on balance much would be lost by catering to such requests.

208 See Revesz, supra note 2, at 1769–71.

209 A striking example of the potential value of statistical studies is provided by the recent recognition by the Massachusetts Institute of Technology, in response to strong empirical evidence, that it had engaged in “totally unconscious and unknowing” discrimination against female faculty members in the School of Science. Carey Goldberg, M.I.T. Admits Discrimination Against Female Professors, N.Y. Times, Mar. 23, 1999, at A1 (quoting Robert J. Birgeneau, Dean of the School of Science, Massachusetts Institute of Technology).
cides cases in an ideological manner.\textsuperscript{210} In contrast, my systematic study of this issue yields a far more nuanced view, showing that a judge’s ideology had an important impact between the mid-1980s through the early 1990s but not in the 1970s, that it had a more significant impact in industry challenges than in environmental challenges, and that this impact manifested itself with respect to procedural challenges but not statutory challenges.\textsuperscript{211} But even if empirical studies of this sort incurred the cost of making the public more likely to believe that courts act in an ideological manner, the benefits of greater understanding of the functioning of the judiciary coupled with the possibility that this understanding could be the catalyst for more self-consciousness on the part of judges as well as for desirable institutional reforms strike me as sufficiently compelling to outweigh such costs.

In summary, Chief Judge Edwards has not advanced a persuasive argument in support of his broad attack on empirical studies attempting to evaluate the validity of positive political economy models. Nor is he on firm ground in his criticism of empirical studies attempting to measure the effects of a judge’s ideology on her votes.

CONCLUSION

Throughout his essay, Chief Judge Edwards resorts to the use of strident and tendentious rhetoric. For example, he refers to my article as a “so-called ‘empirical stud[y],’”\textsuperscript{212} consisting of “heedless observations”\textsuperscript{213} and containing “heedless language.”\textsuperscript{214} My “method,” he says, consists of “framing the most cynical hypothesis in pursuit of a significant-sounding formulation.”\textsuperscript{215} He attributes to me an “evasive impulse,”\textsuperscript{216} and says that my work exhibits a “tendency to push the data into bogus interpretations.”\textsuperscript{217} Most

\textsuperscript{210} See Revesz, supra note 2, at 1717–18 & nn. 3 & 5.
\textsuperscript{211} See supra notes 15–21 and accompanying text.
\textsuperscript{212} Edwards, supra note 1, at 1335.
\textsuperscript{213} Id.
\textsuperscript{214} Id. at 1344.
\textsuperscript{215} Id. at 1354.
\textsuperscript{216} Id. at 1360.
\textsuperscript{217} Id. at 1368.
troublingly, as discussed earlier, he cavalierly and without any foundation accuses me of manipulating the experimental methodology.\(^\text{218}\) Despite this inflammatory style, which is not the norm in academic discourse of this kind,\(^\text{219}\) each of the numerous objections that Chief Judge Edwards levels against my work is without merit. Chief Judge Edwards was led astray by his lack of sufficient attention to the claims in my article and his misunderstanding of the basic methodologies of empirical analysis, especially as applied to studies of judicial behavior.\(^\text{220}\) Chief Judge Edwards’ response also suffered from his failure to realize that a number of the criticisms that he raised against my article could just as easily have been leveled against his earlier study of whether ideology influences votes on the D.C. Circuit,\(^\text{221}\) on which he continues to rely.\(^\text{222}\) Finally, the style that Chief Judge Edwards chose for his response is not well suited to dispassionate analysis.\(^\text{223}\)

Similarly, Chief Judge Edwards does not succeed with respect to his efforts to present an alternative vision concerning the operation of the D.C. Circuit. His claim that the low dissent rate on the D.C. Circuit implies the lack of ideological division on his court is the product of a flawed methodology that does not consider the manner in which a judge’s vote is affected by the identity of her colleagues. His description of the collegiality among the judges on the D.C. Circuit is inapposite to any of the claims made in my article. Finally, his argument that it is understandable that the identity of the judges would play an important role with respect to procedural challenges supports, rather than undercuts, the conclusions of my article.

Perhaps most troubling are Chief Judge Edwards’ attacks against the genre of empirical studies of adjudication, including studies at-

\(^{218}\) See supra notes 54–59 and accompanying text.

\(^{219}\) Before his appointment to the bench, Chief Judge Edwards was a tenured professor at Harvard University and the University of Michigan. For the last several years, Chief Judge Edwards and I have been colleagues on the faculty of New York University, where he teaches, as an Adjunct Professor, a popular and highly regarded seminar on the appellate process.

\(^{220}\) See, e.g., supra Section II.A.1 (dealing with the treatment of unpublished opinions), Section II.B.3 (dealing with the treatment of nonprocedural challenges).

\(^{221}\) See supra notes 154–57, 202–05 and accompanying text.

\(^{222}\) See Edwards, supra note 1, at 1364–65 & n.83 (citing Edwards, Public Misperceptions, supra note 143, at 620).

\(^{223}\) See supra notes 212–19 and accompanying text.
tempting to ascertain the validity of positive political economy models. There is no good argument against subjecting judicial votes to empirical analysis. Moreover, well-conducted studies of this type must include an independent variable measuring the impact of judicial ideology. There is simply no plausible argument for the contrary position.

The federal judiciary and the legal academy are two success stories of the legal profession in the United States. Perhaps the best proof is the extent to which judges and lawyers from all over the world come to the United States to observe and learn from these institutions. In the end, I believe that the usefulness of Chief Judge Edwards’ response to my article and of my reply to him will depend in part on whether this debate can spur an open discussion among judges and academics concerning the role of scholarship about the work of the federal judiciary, so that differences can be aired, opposing perceptions can be addressed, and the competing positions can be better understood.