

**The Constraining Effect of Law:
Connecting Judicial Opinion Language to Outcomes**

By

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Abstract

This paper argues that the more a legal dispute focuses on facts, the more latitude it offers for the exercise of judicial ideology. Conversely, the more a legal dispute focuses on the proper meaning and application of legal standards, the less influential is judicial ideology. I test this argument using computer-assisted content analysis to measure the extent to which legal disputes are based on interpretations of facts and interpretations of relevant legal standards, respectively. The results of this content analysis are then used as independent variables in a model predicting the outcomes of legal challenges to the actions of administrative agencies. The results suggest that highly fact-bound decisions amplify the effects of judicial ideology while highly law-bound decisions constrain the effects of ideology.

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"If the facts are against you, argue the law. If the law is against you, argue the facts. If the law *and* the facts are against you, pound the table and yell like hell."

- quoted by, Carl Sandburg, in *The People, Yes* (1936)

Carl Sandberg's aphorism suggests that there are at least two possible bases for resolving legal disputes, and that sometimes these different bases point toward different outcomes. Litigants can present arguments based on interpretations of relevant legal standards (i.e. law) or on interpretations of the relevant facts, or both, and judges can explain their resolution of the dispute in terms of either of these bases. It may be, however, that one of these bases constrains judges more than the other, and that the fact-bound or law-bound nature of the case influences how judges decide these cases.

The question of whether and to what extent law constrains judges has been at the center of scholarly debates in the judicial politics field for the last five decades and has animated countless research projects. The question is important because the policy-making role of judges in our political system only makes sense if judges' decisions are guided by law. However, since the early attitudinalists (e.g. Pritchett 1948; Schubert 1965; Spaeth 1961) established that policy preferences strongly influence judges' decisions, and therefore that the influence of law over judicial decisions is incomplete or non-existent, the role of law has been viewed skeptically by scholars of judicial politics.

I advance this area of study by exploring whether the nature of a legal dispute, the extent to which it focuses on disagreement over facts or disagreement over law, systematically increases or decreases the influence of the judges' policy preferences. I find that the more a dispute focuses on facts, the more influence the judges' policy preferences have on the outcome of the case. Conversely, the more a dispute centers on the proper meaning and application of legal standards, the less influence the judges' policy preferences have on the outcome of the case. In disputes focused almost exclusively on law, liberal judges and conservative judges act very much alike. This suggests that law is guiding the decisions in those cases.

In order to determine the bases of the courts' decisions, I dig into judicial opinions. Judicial scholars have long acknowledged that the content of judicial opinions is important,¹ but have rarely tackled the task of incorporating opinion content into their models (but see Corley, Howard and Nixon 2005).² Computer-assisted content analysis (CACA) offers a reliable and economical tool for measuring the content of opinions. CACA overcomes the problems of inconsistency in human coding of texts and has the benefit of transparency because it allows the researcher to specify exactly what features of the texts are utilized. This method has great potential for improving scholars' ability to study the content of legal texts in systematic ways.

This research advances current knowledge of judicial behavior in two important ways. First, it shows that the fact-bound or law-bound nature of court cases systematically affects the extent to which judges rule according to their policy preferences. The more a case focuses on factual matters, the more magnified is the effect of the judges' preferences. Increased focus on legal interpretations dampens the effect of policy preferences. When cases turn on factual matters, variation in judges' policy preferences generates wide variation in outcomes. When cases turn on legal interpretation, judges with very different policy preferences produce very similar outcomes. I interpret this finding as showing that legal standards constrain judges' decisions, either because judges choose to rely on clear legal standards when they are available or because disputes based on legal standards are more likely to trigger review and possible reversal by higher courts.

Secondly, this paper describes and demonstrates a method of CACA that can be used to characterize legal texts (e.g. court opinions, briefs submitted by litigants or amici, or statutes) in terms of their content. This method allows researchers to include the contents of legal documents in their models

¹ For example, Segal and Spaeth (1993, 261) note that the opinion is the “core of the Court’s policymaking process.”

² There are, of course, important exceptions. Epstein and Knight (1998) examined the way that variation in policy preferences among the justices is transformed into judicial opinions. Maltzmann, Spriggs, and Wahlbeck (2000) extensively analyzed the *process* of opinion-creation on the U.S. Supreme Court. But their work did not focus on the *content* of the Court’s opinions.

in a way that is economical and meets social science standards of validity and reliability. The method is also very flexible, in that it can be adapted to measure any dimension of content.

The paper proceeds as follows: the next section explains the theoretical assumptions that support the argument and spells out the relationships between the fact-bound or law-bound nature of legal disputes and the influence of judges' policy preferences. The third section explains the research design in detail. The final sections of the paper present the results of the analyses and discuss their implications.

Law, Facts and Ideology on Court Decisions

Research into decision-making on the U.S. Courts of Appeals shows that decisions are guided by the policy preferences of the judges (e.g. Goldman 1975; Songer and Davis 1990; Baum 1997; Humphries and Songer 1999 ; Sunstein et al. 2006), relevant legal standards (Cross 2007; Songer, Ginn, and Sarver 2003), the preferences of supervising courts (Songer, Segal and Cameron 1994) and the particular combinations of judges on judicial panels (Kastellec 2011). Taken as a whole, this research suggests that while judicial policy preferences are important, they are not the only systematic influence.

Scholars have refined this research by looking for circumstances in which judges' preferences are more or less influential. Recent empirical scholarship has identified several legal factors that moderate the influence of judges' policy preferences on their decisions. At the Supreme Court level, Bartels (2009) demonstrates that the influence of justices' ideologies on their decisions varies in predictable ways. Zorn and Bowie (2010) show that the place of a court within the judicial hierarchy moderates the effect of policy preferences, with preferences mattering more as cases move up the judicial ladder. Lindquist and Cross (2005), studying decisions in the U.S. Courts of Appeals, show that judges' policy preferences are significantly more influential in cases of first impression (for which no authoritative precedent exists) than in other cases. Similarly, Randazzo, Waterman and Fine (2006) demonstrate that detailed statutes constrain the extent to which judges indulge their policy preferences when making decisions. All of these

studies identify elements of the contexts of legal disputes that structure the effect of judges' policy preferences on case outcomes.

In this study I argue that legal disputes focused on facts invite greater exercise of judges' policy preferences, while disputes focused on legal standards dampen the effects of judges' policy preferences. The next section explains how the differences between these two types of cases affect judges' discretion.

Judicial Discretion in Disputes over Law and Fact

Legal disputes can focus on factual matters or on legal standards, or a mixture of the two.³ Disputes focusing on facts involve questions about the accuracy and relevance of the facts asserted by the litigants and whether or not the facts submitted by the instigating party are sufficient to meet the appropriate burden of proof or standard of review. When an appellate court is reviewing the decision of a trial court, the appellate court will typically accept the factual conclusions of the trial court unless it finds that they are “clearly erroneous.” In the area of administrative law, disputes over facts frequently turn on whether the agency successfully shows that its action is supported by “substantial evidence.”⁴ All of these criteria are deferential, but none of them are precise. There is no obvious rule for determining whether a decision being reviewed is supported by enough accurate and relevant evidence for it to be termed “substantial” or not “clearly erroneous.” The lack of concrete standards relevant to factual inquiries provides space for judges’ ideologies to work.

Resolving factual disputes is not merely a matter of determining what the true facts are. Often there are undisputed facts supporting both sides. The court must decide which facts offer the most relevant and compelling evidence. *Neely v. Shalala*⁵ provides an example of a dispute focused on facts.

³ I place disputes over procedural matters in the category of disputes over correct legal standards.

⁴ “Substantial evidence” means such relevant evidence as a reasonable person might accept as adequate to support a conclusion. *Richardson v. Perales*, 402 U.S. 389, 401, 91 S.Ct. 1420, 1427, 28 L.Ed.2d 842 (1971).

⁵ 997 F.2d 437

Neely applied for social security disability benefits, which were denied. The court's job was to determine whether the Social Security Administration's denial of Neely's application was supported by substantial evidence. The case turned on whether Neely was sufficiently disabled by pain to be unable to work. Resolving the dispute involved not only weighing Neely's testimony with regard to her pain against evidence that she was able to carry out household tasks and even go deer hunting without pain medication, but also determining whether jobs were available that Neely would be able to perform. It is safe to say that the issues in this case were not ones that the judges studied in law school, and therefore judges are not socialized toward a common way of approaching them. Elements of the judges' ideologies, such as their appraisals of the overall worth of government benefit programs, are likely to influence which facts seem credible and relevant.

*State Corporation Commission v. Interstate Commerce Commission (ICC)*⁶ provides a different example of a dispute centered on factual matters. In this case, a Tenth Circuit Court Panel evaluated the ICC's decision that Missouri Pacific's abandonment of 66 miles of railroad line was economically justified and would not cause serious problems for the community served by the line. As the court noted, the State Corporation Commission was "primarily challenging several findings of the ICC and the sufficiency of the underlying evidence" (894 F.2d 1142). The evidence in the case concerned how much money Missouri Pacific would save by abandoning the line, whether alternative modes of transportation could provide for the needs of the local area, and the increased road maintenance costs that would result from trucking of cargo that had previously moved by rail. Finding that Missouri Pacific presented "plausible" reasons for abandoning the rail line, the court upheld the ICC's decision. The circuit panel had to make relatively unstructured evaluations of the credibility and relevance of the evidence offered by the two

⁶ 894 F.2d 1141

sides, and then apply the vague "substantial evidence" standard. When the legal standards for decisions are vague, it is likely that judges' ideologies play a significant role in their decisions.⁷

In contrast to disputes focusing on facts, disputes over legal standards require judges to identify the relevant legal standard, interpret it, and apply the interpretation to the dispute. For a number of reasons, this is a more highly structured task than evaluating factual matters. The set of approaches the court can use to interpret a statute or other legal standard (e.g. a Federal Regulation or executive order) is limited. The two approaches typically used are to apply the plain meaning of the law or to apply the intent of the lawmaker (Cross 2007). Both of these approaches limit the leeway of the court, at least in comparison to the court's latitude in interpreting factual matters (Sunstein 1989, 441-442). Several other factors limit judges' freedom in interpreting law: Judges are trained and socialized in law school into common ways of interpreting law. The legal standards they are applying have been written for the express purpose of guiding the discretion of those implementing policy. In working with legal standards, courts customarily take into account relevant precedent, which can further guide and limit their discretion (Klein 2002).

A 1988 case, *Brotherhood of Railway Carmen v. ICC*,⁸ illustrates the task of applying a legal standard. In this case, a D.C. Circuit Court panel had to determine whether section 11341(a) of the Interstate Commerce Act⁹ allowed the ICC to override a collective bargaining agreement between unions and the railroad carrier CSX. The panel's opinion examines whether statutory language allowing the ICC

⁷ See also Richard Posner's statement in *How Judges Think* (p. 9) "Law, in a judicial setting is simply the material, in the broadest sense, out of which judges fashion their decisions. Because the materials of legalist decision making fail to generate acceptable answers to all the legal questions that American judges are required to decide, judges perform have occasional—indeed rather frequent—recourse to other sources of judgment, including their own political opinions or policy judgment, even their idiosyncrasies. As a result, law is shot through with politics and with much else besides that does not fit a legalist model of decision making. "

⁸ 880 F.2d 562

⁹ 49 U.S.C. Sec. 11341(a)

to exempt carriers from "antitrust laws and from all other law" authorizes the ICC action. The opinion discusses the statutory language, relevant Supreme Court precedent, and the legislative history of the Act on the way to concluding that the ICC exceeded its statutory authority. Although all these sources allow room for disagreement, judges have been trained and socialized into common ways of interpreting them.

A few scholars have investigated the effects of law and facts on judges' discretion in resolving disputes. Jerome Frank (1951, 56-59) argues that in many cases the law governing a particular dispute is so clear that the judge has no real discretion, but that the judge's "fact discretion" (i.e. discretion over which facts to accept as true, which facts to consider relevant, and how much weight to give to these facts) is "almost boundless." (quoted in Gennaioli and Shleifer 2008, 1-2).¹⁰ Richard Posner concurs: "The process by which some facts are highlighted and others ignored or given little weight need not reflect a conscious endeavor to make the judge look good and reduce the likelihood of reversal. It may simply be the consequence of uncertainty opening the way to bias" (Posner 2005, 1270).¹¹

There are at least three plausible explanations for why judges' ideologies would be more influential in cases turning on factual disputes compared to cases focused on disputes over legal standards. First, disputes over facts may simply be less cognitively constraining (Braman 2010) than disputes over legal standards. That is, judges may be unconsciously guided by their ideological commitments in fact-bound cases because legal factors simply do not have enough traction to guide them toward a particular decision. This explanation tracks the comments by Frank and Posner, above. A second plausible explanation is that judges believe that cases decided on the basis of facts are less likely to be reviewed by supervising courts (Perry 1993, 223-4). So, fact-bound cases present to judges opportunities to exercise their policy preferences with minimal fear of reversal. However, Klein and Hume (2003) and

¹⁰ Frank's comment was focused on trial judges, but his point about fact discretion applies equally to appellate court judges when they are determining whether an agency had a sufficient factual basis for its decision.

¹¹ Posner is speaking about federal district judges, but notes a few pages later that "[T]he analysis of federal circuit judges is broadly similar to that of district judges" (2005, 1273).

Songer, Ginn and Sarver (2003) both find that fear of reversal does not motivate judicial behavior. A third possible reason that judges' ideologies would be more influential in fact-bound cases is that judges could be taking advantage of the fact that supervising courts are less likely to review decisions which seem to be based on facts. Thus, when judges want to "protect" a decision that matches their policy preferences, they package the decision in an opinion that stresses facts rather than law. This last, strategic, explanation is consistent with the conclusions of Smith and Tiller (2002) and Hume (2009).

These different theoretical explanations all point to the same empirical expectation: legal disputes which focus on facts provide substantial degree of latitude for judges' ideologies to work, but disputes over the proper interpretation of legal standards tend to limit the effect of ideology. These factors suggest two hypotheses:

H1: *The influence of judges' policy preferences on their decisions increases as disputes focus more on arguments over facts.*

H2: *The influence of judges' policy preferences on their decisions decreases as disputes focus more on the interpretation of legal standards.*

Research Design

My strategy for evaluating these hypotheses is to create indexes of the extent to which court cases involve disputes over facts and the extent to which they involve disputes over legal standards. I then use these indexes as independent variables and estimate their effect on the extent to which policy preferences influence the court's decision. The data consist of administrative law cases¹² drawn from *United States*

¹² I selected all decisions involving disputes that originated in federal administrative agencies from the years 1925-2002. That is, I selected all cases for which the ADMINREV variable was less than 15. The data end in 2002 because that is the most recent year contained in the Courts of Appeals Database.

Courts of Appeals Database.¹³ Administrative law furnishes a good context for this research because administrative law cases separate conceptually into disputes over the factual basis of the agency's decision and disputes over the agency's legal authority.¹⁴ The dependent variable in these analyses is a dummy variable coded 1 if the agency wins the case, and coded 0 if the agency loses the case in whole or in part. The variable is coded 1 in about 53% of the cases.

Main Explanatory Variables

The main independent variables of interest are the indexes that indicate the extent to which each case focuses on factual matters and legal standards, respectively. I generate these variables through content analysis. Systematically coding the content of a large set of opinions is difficult and time-consuming. Computer assisted coding has advantages over human coding in terms of time, reliability and transparency (Evans et al. 2007, Wright and Hall 2008).¹⁵ These qualities have led political scientists to

¹³ *The U.S. Courts of Appeals Database*, Donald R. Songer (Principal Investigator), NSF# SES-89-12678 and *The United States Courts of Appeals Database Update* Ashlyn K. Kuersten and Susan B. Haire (Co-Principal Investigators) National Science Foundation Grant SES-99-11284. The database and documentation are available at <http://www.cas.sc.edu/poli/juri/appct.htm>.

¹⁴ Major casebooks in administrative law separate the treatment of judicial review of agency action into sections on "Judicial Review of Questions of Fact" and "Judicial Review of Questions of Law." See Aman and Mayton (2001) and Breyer et al. (2002).

¹⁵ Using CACA, researchers can specify exactly what instructions computers are given, communicating to the scholarly community what was done and allowing other scholars to replicate and confirm the analysis. It is certainly true that some judgment and nuance can be lost by reducing the human element in the coding process. However, much more can be gained in terms of economy, reliability and transparency.

adopt CACA for coding party platforms (Laver, Benoit, and Garry 2003), presidential speeches (Coe 2007), and the Congressional Record (Monroe et al. 2008).¹⁶

The goal of my content analysis is to produce indicators of the extent to which the opinion in each case focuses on factual review and statutory review, respectively. These categories are not mutually exclusive; some opinions discuss both types of questions extensively. Therefore, I develop two separate indexes for each opinion, one indicating the extent to which the opinion discusses factual review and one indicating the extent to which the opinion discusses statutory review. The value of each index is the cumulative frequency of terms that are highly indicative of the type of review. These indexes are sets of terms (i.e. words and phrases) that are associated with each type of case, factual review and statutory review.

The first step in creating the indexes was to create a list of *candidate terms* that might be associated with disputes over facts, or law, respectively. I assembled this candidate list by creating a frequency count of all the words used in all the opinions. I then examined this list for terms that were used relatively frequently and seemed, from my knowledge of administrative law, likely to be used in discussion of factual review and statutory review, respectively. To complete the list, I added several

¹⁶ Legal documents are well-suited for CACA because they are highly structured in terms of the vocabulary used. Words and phrases have meanings that are understood by the community of lawyers and judges who write and read them. This means that participants in the legal process who want to convey a particular message must use a relatively limited and predictable set of terms (Gibbons 2004). In the study of judicial politics, Corley and co-authors (Corley 2008; Corley, Collins, and Calvin 2010) have made innovative use of plagiarism software to measure the extent to which the Supreme Court takes opinion language from litigants' briefs and lower courts. McGuire and Vanberg (2005) and McGuire, Vanberg and Yanus (2007) have applied the *Wordscores* software (Laver, Benoit, and Garry 2003) to characterize the ideological tone of Supreme Court opinions. The type of CACA I use here is more flexible than the approaches discussed above, and is more similar to Evans et al.'s (2007) classification of amicus briefs according to their ideological direction.

phrases that are closely associated with the one of these types of legal arguments.¹⁷ Although the creation of this list of candidate terms involves subjective elements, the list itself is only a starting point and includes any terms that could plausibly indicate a discussion of legal standards or factual bases relevant to administrative law disputes.¹⁸

I then employed a computer program which examined each court opinion and recorded the frequency of each candidate term in each opinion.¹⁹ I transformed these raw frequencies to make them more comparable across opinions and across terms: I divided each term's frequency by the length of the opinion in words to get the relative frequency of the term²⁰ and then divided these relative frequencies by the mean relative frequencies across all opinions.²¹ This transformation produced *standardized frequencies* that reflect the frequency of each term, relative to its average frequency. So, a *standardized frequency* higher than 1 indicates the term was used with greater than its average frequency in that opinion; a *standardized frequency* lower than 1 indicates the terms was used with lower than its average

¹⁷ I did not run a frequency count of phrases. Instead, I consulted administrative law casebooks to find these phrases (e.g. Aman and Mayton 2001; Breyer et al. 2002).

¹⁸ The complete list of candidate terms is presented in appendix 1.

¹⁹ The program, written by the author in the Python coding language, records the frequency of words and phrases in the body of the majority opinion. Occurrences of the words and phrases in the headnotes and dissents were not counted.

²⁰ This was necessary because some opinions are much longer than others, and are therefore likely to contain higher frequencies of each particular term. The opinions ranged in length from as few as 16 words (“We find no error in the record. The decision of the Federal Communications Commission is therefore affirmed.”) to as many as 36,245.

The average length of opinions in the data is 3,426 words

²¹ This was required because there are substantial differences in the frequencies of individual words. For example, even after normalizing for the length of the opinion, the word “evidence” and its variants occurs more than 4 times as often as the word “statute” and its variants, and 22 times more often than the word “construe” and its variants. If I included these terms in the indexes without normalizing them, the terms that occur with higher frequencies (and with higher variances) would dominate the variation among the indexes.

frequency in that opinion. These frequency data were then merged with the *United States Courts of Appeals Database*. This produced a data set of around 1500 cases with information on the standardized frequencies of the candidate terms in each opinion and all the information on the origins, participants, issues, and outcomes of the cases contained in the Courts of Appeals Database.

To determine which terms were associated with factual review and statutory review, respectively, I manually coded a training set of 142 opinions as to whether the opinion discussed factual review, statutory review, or both.²² Of these 142 cases, 82 involved statutory review and 89 involved factual review. A list of the citations of these cases and how each was classified is included in appendix 2.

I used these classifications of opinions to determine which words and phrases are associated with statutory review and factual review, respectively. For each term in the list of candidate terms I calculate the mean *standardized frequency* value for the manually coded opinions involving statutory review and the mean *standardized frequency* value for the manually coded cases not involving statutory review and take the difference between these means. This difference is large for terms which are central to the content of statutory review opinions but not relevant to the content of opinions not involving statutory review. Therefore, the size of this difference indicates the value of the term for distinguishing between opinions that involve statutory review and those that do not. I followed the same procedure to determine the differences in mean *standardized frequency* values between opinions involving factual review and those not involving factual review for all terms in the candidate list.²³ After calculating these differences

²² I counted cases involving formal procedures used by the agency as statutory review. The coding rules were simple. Opinions which resolved disputes over the factual circumstances underlying the case were coded as involving “factual review.” Opinions which did not resolve factual disputes were coded as not involving factual review. Opinions which resolved disputes over the meaning and application of statutes or regulations were coded as involving statutory review. Opinions which did not resolve disputes over the meaning and application of statutes or regulations were coded as not involving statutory review.

²³ To be clear, these mean *standardized frequency* values were computed using the training set of 142 manually coded opinions.

Table 1: Terms in Each of the Language Indexes

Terms Associated with Statutory Review	Terms Associated with Factual Review
Application	“Administrative Law Judge”
Authority	Conclusion, conclusions
“Arbitrary and Capricious”	Credible, credibility
Construction, constructions	Examine, Examined, examination
Construe, construes, construed	Expert, experts, expertise
Chapter	Evidence, evidentiary
Congress	Fact, facts, factual
Code	Finding, findings
Controlling	Found
Cost, costs	Proof, prove, proves, proved
CFR (Code of Federal Regulations)	Record
Defer, deference, deferential	Showing
Determine, determined, determining	Statement
Hearing, hearings	Substantial, substantially
Intent, intended, intention	Sufficient, sufficiently
Irrational, irrationally	Support, supports, supporting
Jurisdiction	“Substantial evidence”
Language, languages	Test
Law, laws, lawful, lawfully	Testify, testified, testimony
Legal, Legally	“Trial Examiner”
Legislation, legislative, legislature	
Meaning, meanings	
Notice	
Order	
Provision, provisions	
Process	
Precedent, precedents	
Rational	
Rationale	
Reasonable, Reasonably	
Regulation, regulations	
Require, requires, required, requirements	
Review, reviewed, reviews	
Rulemaking	
Statute, statutes, statutory	
Text, texts, textual	
USC (United States Code)	
Uncertainty	
Unreasonable, unreasonably	

of means, I created the two indexes by selecting all the terms for which the difference of means is positive and significant at the .05 level. Thirty-nine terms met this test for opinions involving statutory review; 21 terms satisfied the test for opinions involving factual review. The terms in each index are listed in table 1.²⁴

In addition to being derived from training data, the terms in Table 1 have strong face validity. From the first column, terms such as *chapter*, *congress*, *code*, *CFR*, *jurisdiction*, *language*, *law* (and variants), *legal* (and variants), *legislation* (and variants), *provisions*, *regulations* (and variants), *rulemaking*, *statute* (and variants), *text* (and variants) and *USC* all refer to law or sources of law. *Notice*, *hearing*, *order* and *process* are associated with the legal procedures agencies are required to go through before making decisions. *Application*, *defer* (and variants), *intent* (and variants), *meaning*, *precedent*, *rationale*, and *review* (and variants) all refer to the process of interpreting legal standards. *Authority*, *controlling*, *determine* (and variants) and *require* (and variants) relate to the way statutes control behavior. Finally, terms like *arbitrary and capricious*,²⁵ *rational*, *irrational*, *reasonable* and *unreasonably* are often used to describe interpretations of legal standards.

Likewise, the terms in the second column clearly relate to factual review. *Record* and *statement* refer to the administrative record that contains the facts relevant to the dispute. *Administrative Law Judge* and *Trial Examiner* refer to judges who determined the facts of the case before the dispute arrived at the Circuit Court. *Substantial evidence* is the usual standard applied in fact-based disputes in administrative law. Terms such as *credible*, *evidence*, *facts*, *findings*, *proof*, *showing*, *support*, and *testimony* (and variants of all these) all relate to the evidence relevant to the dispute.

²⁴ Notice that in some cases I treated variations of the same term (e.g. *construe*, *construes*, *construed*) as identical. I did this if I felt there was no meaningful difference in these variations on the term for the purposes of my analysis.

²⁵ The words “arbitrary” and “capricious” are used in the Administrative Procedures Act’s enumeration of reasons for overturning agency actions: Courts shall “(2) hold unlawful and set aside agency action, findings, and conclusions found to be (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 USC 706(2).

The lists of words in the indexes were transformed into numeric values by multiplying each term by the *standardized frequency* of the term in the opinion. These indexes indicate the extent to which each dispute concerns factual matters and legal standards, respectively.

To create the interactive variables used to evaluate my hypotheses, I multiplied these indexes by a measure of the circuit court judges' ideological sympathy for the agency decision being challenged.

Panel Alignment with Agency measures the extent to which the policy preferences of judges on the circuit court panel are consistent with the agency action. Circuit court decisions are ordinarily made by panels of three judges. I use the median Giles-Hettinger-Peppers score on the panel to represent the policy preferences of the judges (Giles, Hettinger and Peppers 2001). These scores range from -.684 to .581, with higher scores indicating more conservative preferences. The direction of the agency action being reviewed is derived from the Courts of Appeals data set. If the agency action is conservative, *Panel Alignment with Agency* takes on the median Giles-Hettinger-Peppers score on the panel. If the agency action is liberal, *Panel Alignment with Agency* is the median Giles-Hettinger-Peppers score multiplied by -1. Higher values of *Panel Alignment with Agency* indicate greater panel agreement with the agency policy being challenged. In the analyses presented below, the *Panel Alignment with Agency* variable represents the influence of the judges' policy preferences on the case outcome.

The interactive variables *Panel Alignment*Statutory Review Language* and *Panel Alignment*Factual Review Language* are the multiplicative products of their components. The arguments presented above suggest that the influence of *Panel Alignment with Agency* should increase as the *Index of Factual Language* increases, and therefore the coefficient on this interactive variable should be positive. A second implication of the theoretical argument is that the influence of *Panel Alignment with Agency* should decrease as the *Index of Statutory Review Language* increases, and therefore the coefficient on this interactive variable should be negative.

Control Variables

Beyond these variables of primary interest, I include several variables to control for other plausible influences on the court's decision. *Agency Alignment with Supreme Court* measures the ideological consistency between the agency action being reviewed and the policy preferences of the Supreme Court. It is the median Judicial Common Space (JCS) score for the U.S. Supreme Court (Epstein et. al 2007).²⁶ If the agency action is positive, *Agency Alignment with Supreme Court* takes on the median JCS score on the Court. If the agency action is liberal, the *Agency Alignment with Supreme Court* is the median JCS score multiplied by -1. In this way, higher numbers represent a greater probability that the Supreme Court would approve of the agency action. If the circuit court panels are attempting to implement the preferences of the Supreme Court, this variable should be positively associated with decisions favoring the agency.

Agency is Appellant is a dummy variable coded 1 when the agency is the party appealing the verdict below. If the agency is the appellant, this means that it was not the winner in the court below. This indicates that it may not have a strong basis for its action, and so this variable is expected to be negatively associated with decisions favoring the agency. *DC Circuit* is a dummy variable indicating that the panel hearing the case is part of the DC Circuit Court of Appeals. The DC Circuit's administrative law jurisdiction includes most regulations that have national effect. These regulations are more complicated to defend than narrower rules or adjudications, so the agencies' winning percentage in the DC circuit is likely to be lower than in other circuits. If this is the case, DC Circuit should be negatively related to *Agency Win*.²⁷ I use logit regressions to estimate the effect of the independent variables on the probability that the court will rule in favor of the agency.

²⁶ Judicial Common Space scores range from -1 to 1, with higher numbers indicating more conservative policy preferences.

²⁷ Dummy variables for the specific government agencies whose decisions are being challenged are also included in the analysis. NLRB (National Labor Relations Board) , BRB (Benefits Review Board) , CAB (Civil Aeronautics

Results

The results from logit regressions, presented in Table 2, support the hypotheses that the effects of judges' policy preferences are magnified in cases focused on factual matters but dampened in cases heavily focused on statutory review. The first column of numbers evaluates the effects of statutory review language, and the second column of numbers relates to the effects of factual review language. Both models show highly significant chi-square statistics, and both show significant predictive ability, reducing the error rates by more than 23% each.

Effect of Factual Review Language

Looking first at the effects of fact-related language, the coefficient for *Panel Alignment with Agency*, .510, is positive and statistically significant. Because of the interactive variable in the model, this coefficient reflects the situation when *Index of Factual Review Language* equals its mean.²⁸ Note that the coefficient on the interaction term, *Panel Alignment*Factual Review Language*, is positive and highly significant, indicating that the effect of *Panel Alignment* increases as the amount of factual review language increases. With a coefficient that is more than 3 times the size of its standard error, the p-value of this coefficient is .002. This is exactly consistent with theoretical argument above.

A better understanding of these results can be gained by looking at Figure 1.²⁹ The solid line trending upward from left to right in Figure 1 reflects the influence of the judges' policy preferences as

Board), CSC (Civil Service Commission), FCC (Federal Communications Commission), FERC (Federal Energy Regulatory Commission or its predecessor, the Federal Power Commission), FMC (Federal Maritime Commission), ICC (Interstate Commerce Commission), FTC (Federal Trade Commission), NRC (Nuclear Regulatory Commission or the Atomic Energy Commission), SEC (Securities and Exchange Commission), Other Agencies,

²⁸ The results in Table 3 reflect mean-centered versions of the language index variables.

²⁹ Figures 1 and 2 were created using Stata code adapted from Matt Golder's web site

(<https://files.nyu.edu/mrg217/public/interaction.html>, accessed Nov. 10, 2011).

Table 2: Results for Logit Analyses of Influences on Agency Win

	Effect of Fact- Related Language	Effect of Law- Related Language	Both Law and Fact- related language
<i>Panel Alignment with Agency</i>	.510* (.182)	.509 (.182)	0.550 (.184)
<i>Index of Factual Review Language (mean-centered)</i>	-.005 (.003)		-.003 (.003)
<i>Panel Alignment*Factual Review Language</i>	.036* (.011)		.032* (.012)
<i>Index of Statutory Review Language (mean-centered)</i>		.004 (.002)	.004 (.002)
<i>Panel Alignment*Statutory Review Language</i>		-.011* (.005)	-.006 (.006)
<i>Agency is Appellant</i>	-0.687* (0.145)	-.697* (.144)	-.696 (.145)
<i>Agency Alignment with Supreme Court</i>	.397 (.384)	.415 (.383)	.403 (.384)
<i>DC Circuit</i>	-.269 (.146)	-.265 (.147)	-.297* (.147)
Constant	.556* (.109)	.528* (.111)	.522 (.111)*
N	1505	1505	1505
chi2	122.52 (16)*	117.78 (16)*	125.88(18)*
PRE	23.7%	24.0%	22.5%

Standard errors in parentheses; * p<.05

Fixed effects for agencies were included in analysis but are not reported.

the amount of fact-related language in the opinion increases. The two dashed lines above and below the solid line represent the 95% confidence interval for this influence. The vertical line bisecting the graph indicates the point at which the lower bound of the confidence interval rises above 0. On the right side of the graph, the sloping line and the lower bound are both above 0, indicating that in this region the effect of the judges' policy preferences is positive and significant. This is consistent with the attitudinal model of judicial voting, which suggests that policy preferences are the major influence on judicial votes.

On the left side of the graph, however, the lower bound of the confidence interval is below 0, indicating that the effect of the judges' policy preferences is not significant at low values of the *Index of Factual Review Language*. The lower boundary of the confidence interval crosses 0 when the statutory review index equals approximately 15.7, which is essentially the median point of the distribution of factual review index scores. Figure 1 illustrates that the influence of judges' policy preferences increases as disputes focus more on fact-related review, and that when a dispute falls below the median in terms of factual content, judges' policy preferences do not exert a statistically significant influence on their decisions.

Effect of Statutory Review Language

The second column of numbers in Table 2 pertains to the influence of statutory review language on the effect of judges' policy preferences. Again the coefficient for the *Panel Alignment with Agency* is positive and statistically significant, indicating that when the *Index of Statutory Review Language* is at its mean, the judges' policy preferences are shown to influence case outcomes. The coefficient on the interaction term, *Panel Alignment*Statutory Review Language*, is negative and statistically significant, indicating that the effect of *Panel Alignment* decreases as the amount of statutory review language increases. Again, this is consistent with theoretical argument above.

Figure 2 shows the changing effect of *Panel Alignment with Agency* as the amount of statutory review language in the opinion increases. Again, the dashed lines indicate the 95% confidence interval of the effect. As statutory review language increases, judges' policy preferences become less important to

Figure 1.

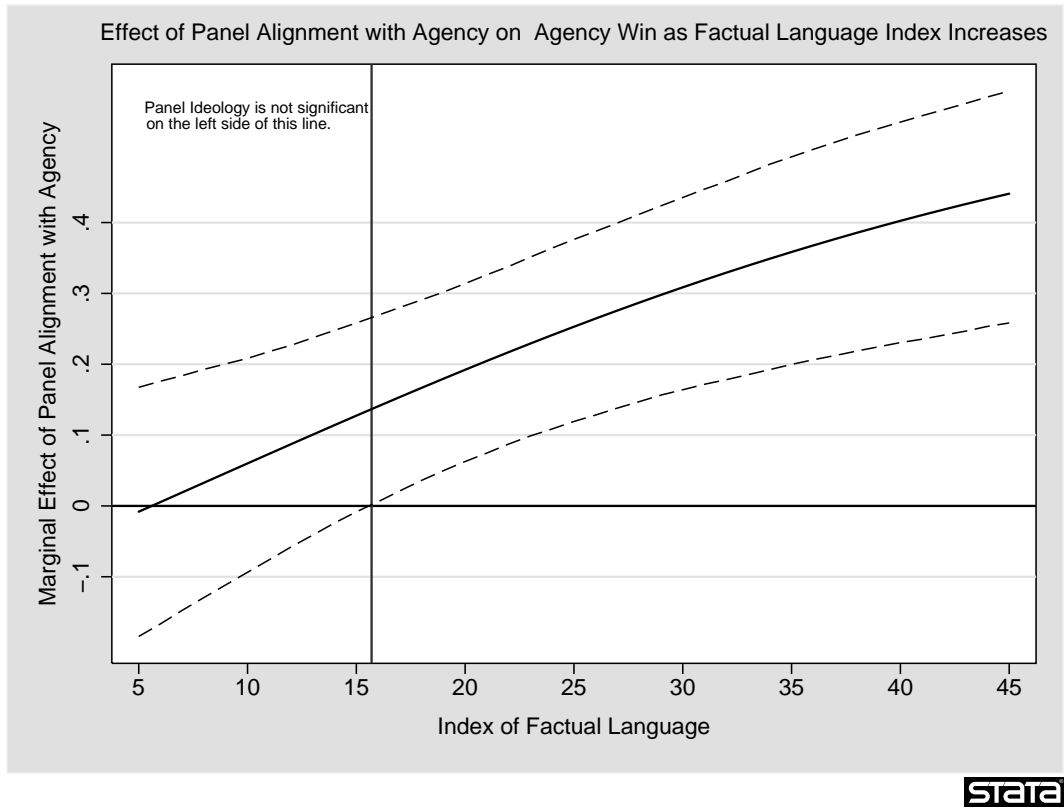
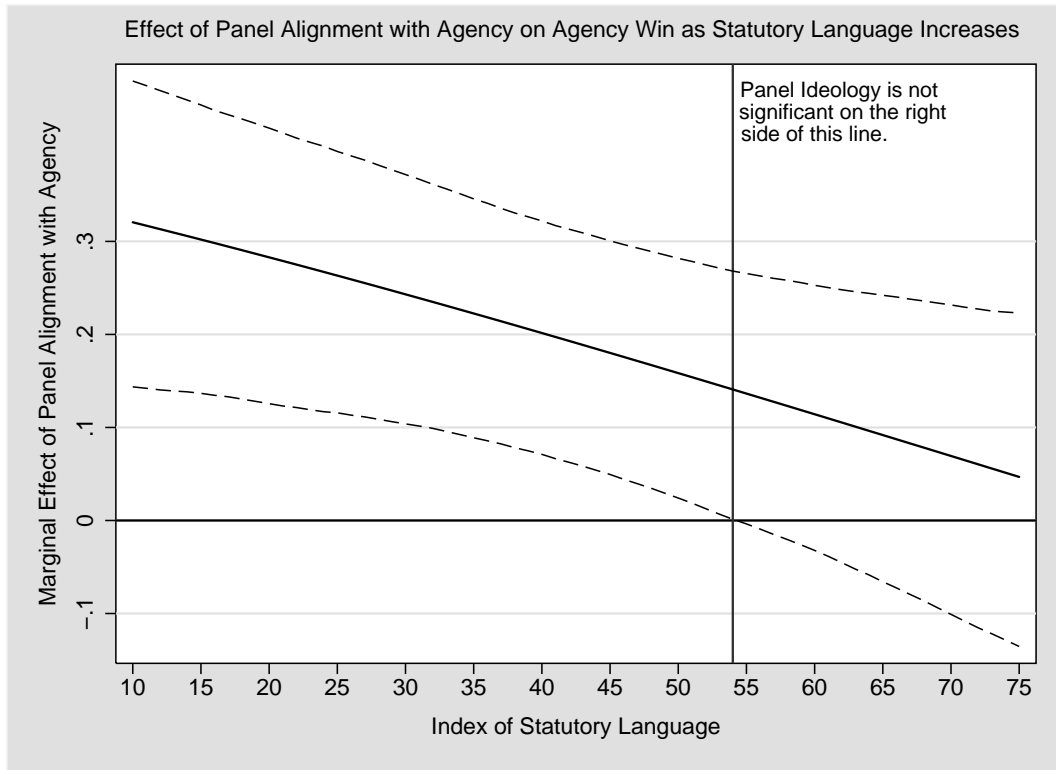


Figure 2.



STATA

the case outcome. *Panel Alignment with Agency* does not significantly influence case outcomes once *Index of Statutory Review Language* rises above 54, which is about the 75th percentile of the index. Thus, for disputes that are above the 75th percentile in terms of their focus on statutory matters, judges' policy preferences are not statistically significant.

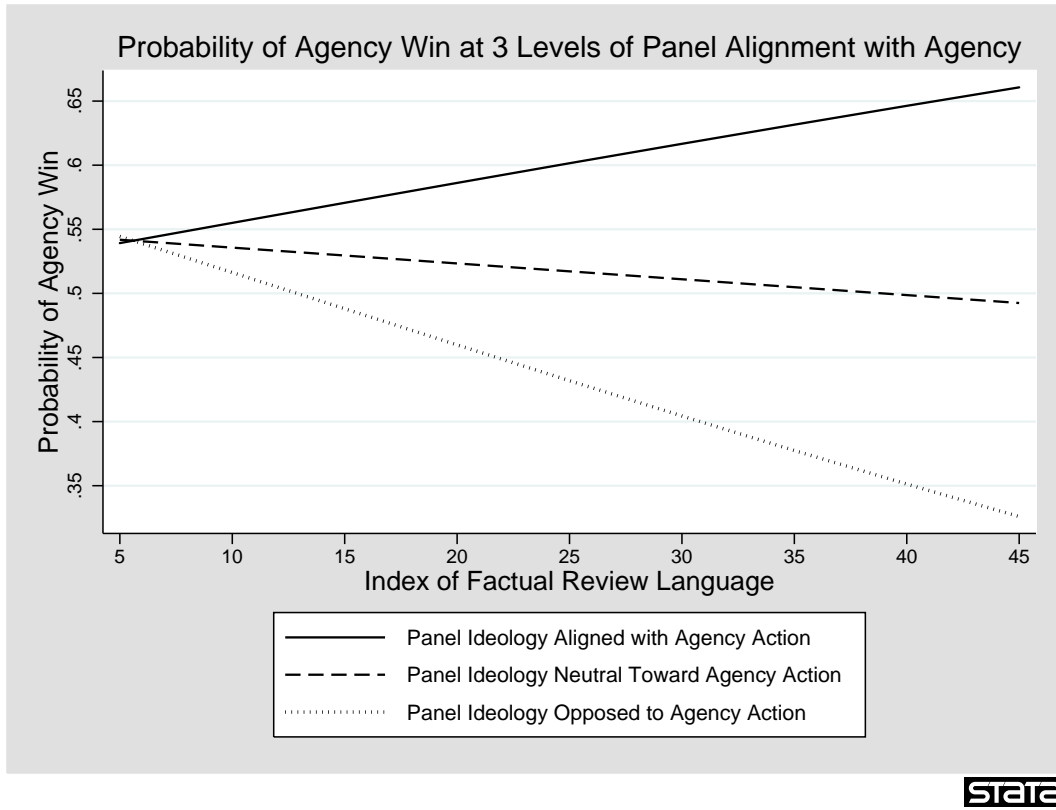
The third column of numbers in Table 2 presents the results of a model including both the statutory language and factual language indexes and each of these variables interacted with *Panel Alignment with Agency*. The coefficient for *Panel Alignment * Factual Review Language* is again positive and statistically significant ($p=.008$), indicating that judges' attitudes become more important as the disputes focus more on factual matters. The coefficient for *Panel Alignment*Statutory Review Language* is again negative, but is not statistically significant in this model. Part of the reason for the reduced influence of the *Panel Alignment*Statutory Review Language* interaction term has to do with the correlation between the *Factual Review Language Index* and the *Statutory Review Language Index*, which is $-.293$. That is, the opinions with low scores on the *Index of Factual Review Language* tend to have high scores on the *Index of Statutory Review Language*. However, the two indexes are not simply two measures of the same phenomena. The words and phrases that make up the two indexes are very different, and are clearly measuring different dimensions of the opinion content. The fact that each index exerts a significant effect on the influence of judges' attitudes shows that each of these dimensions is important.

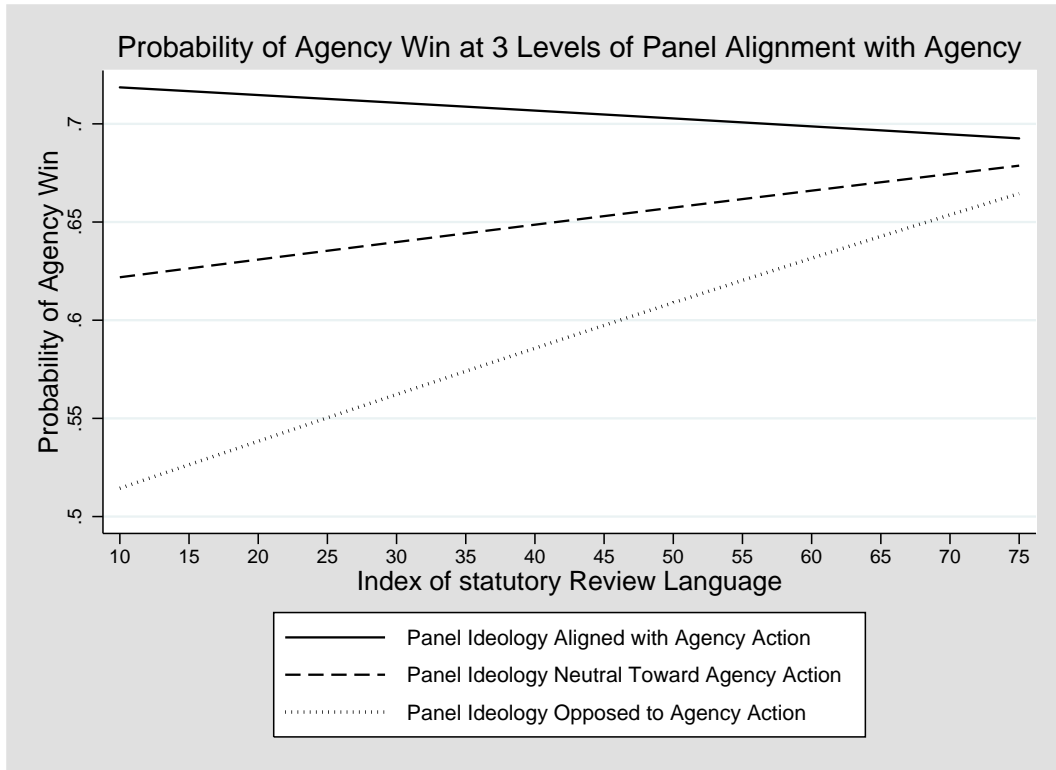
Changes in Probability of Agency Win

Another way to understand how the fact-bound or law-bound nature of a dispute influences the outcome of the case is to analyze changes in the probability of a particular case outcome. Figures 3 and 4 present predicted probabilities of circuit court panels upholding agency decisions.³⁰ Figure 3 presents the

³⁰ To calculate the values in Figures 3 and 4 I used a restricted model, dropping all the dummy variables for federal agencies except the one for the National Labor Relations Board. Dropping the other dummy variables was

Figure 3.





effects of changes in the *Index of Factual Review Language*. The solid line sloping upward from left to right shows the effect of factual language on the probability of a ruling in favor of the agency when the judges are ideologically sympathetic to the agency action (i.e. a liberal panel of judges reviewing a liberal agency action or a conservative panel reviewing a conservative agency action).³¹ At the lowest level of factual language on the graph (10th percentile of the distribution), the probability of a ruling in favor of the agency is just a bit higher than .5. As disputes focus more on factual matters, the ideological sympathies of the judges have more effect, and the probability of a ruling in favor of the agency increases to about .64 at the highest level of factual language on the graph (the 90th percentile of the distribution). The dotted line sloping downward from left to right tells a similar story, this time about judges that are ideologically hostile to the agency decision being challenged. When the challenge does not focus on factual matters, the judges are more likely to rule in favor of the agency and against their ideological preferences. However, as the challenges focus more on facts, the judges are freed to act on their ideological preferences and more likely to overturn the agency decision.

Figure 4 presents similar information on the effect of statutory review language. Again, the solid line indicates the probability that an agency decision will be upheld by a panel that is ideologically sympathetic to the decision. The line descends slightly as disputes are more dominated by statutory matters, indicating that judges become slightly less likely to support the agency. The dotted line that slopes dramatically upward from left to right refers the probability of a ruling in favor of the agency by a panel that is ideologically opposed to the agency action. The probability of a ruling in favor of the agency

necessary to make Stata's *prvalue* function run. The predicted probabilities in Figures 3 and 4 were calculated setting the *Agency is Appellant*, *DC Circuit*, and *NLRB* values to their modal categories (0 in all cases) and the continuous variables (other than *Panel Alignment with Agency and the language indexes*) at their means.

³¹ The lines in Figures 3 and 4 pertaining to panels that favor the agency action, are neutral toward the agency action and are hostile toward the agency action were calculated using values of *Panel Alignment with Agency* at .5, 0, and -.5, respectively.

increases from about .54 to about .69 as the *Index of Statutory Review Language* moves from its 10th percentile to its 90th percentile.

Conclusion and Implications

The results presented here suggest an addendum to the Carl Sandberg's aphorism: "If the judge is with you, argue the facts. If the judge is against you, argue the law." The effect of judges' policy preferences is magnified in disputes that focus on factual matters, and dampened in that focus on the application of legal standards. There are three plausible theoretical interpretations for this finding:

First, Judges may be unconsciously exercising their policy preferences more in cases focusing on factual disputes. That is, the cases come to the courts as primarily about law or primarily about facts, and disputes about facts are simply less cognitively constraining than disputes about law. This is consistent with the fact that precedent, legal training, and accepted interpretive methods all limit the normatively acceptable range of interpretations for any particular legal standard.

Second, Judges may believe that cases based on facts are less likely to be reviewed by higher courts, and therefore consciously feel freer to exercise their policy preferences in these cases. So, cases come to the judges as disputes about facts or law, and judges sees in factual cases the opportunity to indulge their policy goals without fear of reversal. This is consistent with Perry's (1991, 223-224) assertion that higher courts rarely look at cases that turn on sufficiency of evidence, but inconsistent with research findings that circuit judges do not try to avoid reversal.

Third, Judges may be strategically writing fact-based opinions for cases which they've decided on the basis of policy goals, and writing law-based opinions for cases which do not match their policy goals. This would mean that judges are manipulating the contents of some opinions to make certain cases look like they were about facts. This differs from the second possibility, above, in that it suggests judges are deciding whether to emphasize facts or the law in their opinions, again to manage the risk of reversal. This is essentially what Smith and Tiller (2002) and Hume (2009) assert is happening.

The first and second explanations above both imply that the law has a constraining effect on judicial decisions. When disputes are focused on interpreting legal texts, judges of different political stripes are likely to agree on the correct resolution of the case. This is a significant finding and reinforces the growing set of scholarship showing that the effects of judges' ideologies are increased or decreased by the institutional and legal contexts of cases.

One worthwhile extension of this research is to determine whether the opinions written in these cases grow out of the legal arguments made by the litigants. That is, the third possibility listed above implies that judges are not limited to the arguments made by the litigants. One way to investigate this would be to obtain the legal briefs submitted by litigants and run the same sort of content analysis on them, and then compare the sorts of arguments made in the legal briefs with the arguments discussed in the court's opinion.

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Supporting Information

List of all Terms and Phrases Counted by the Python Program.

Terms and Phrases Expected to be Associated with <i>Statutory Review</i>	Terms and Phrases Expected to be Associated with <i>Factual Review</i>
• 706(2)(b)	• 706(2)(a)
• 706(2)(c)	• 706(2)(e)
• 706(2)(d)	• 706(2)(f)
• Accordance, according	• Adequate, adequately
• Adjudication, adjudications	• Arbitrary
• Apply, applied	• Average
• Application	• Basis, bases
• Arbitrary	• Capricious
• Authority	• Concluded
• Authorized, authorizes, authorization, authorize	• Conclusion, conclusions
• Canon	• Data
• Chapter	• Demonstrate, demonstrates
• Clause	• Determination
• Code	• Determine, determined, determining
• Congress	• Discretion, discretionary
• Construction, constructions	• effect
• Construe, Construes, Construed	• Error
• Contrary	• Estimate, estimation, estimates, estimated
• Controlling	• Evidence, evidentiary
• Cost, costs	• Expert, experts, expertise
• Defer, deference, deferential	• Explain, explains, explanation
• Define, defines, defined, definition	• Fact, facts, factual
• Delegate, delegates, delegated, delegation	• Factors, factors
• Dictionary	• feasible
• Document	• Find, finds, findings
• duty	• Information
• Illegal, illegally	• Insubstantial
• Intent, intention, intended	• Insufficient
• Interpret, interprets, interpreted, interpretation, interpretations	• Insufficiently

• Jurisdiction	• Irrational, irrationally
• Language, language's	• Logic, logically, logical
• Law, laws, lawful, lawfully, lawfulness	• Measure, measured, measures
• Unlawful, unlawfully, unlawfulness	• Median
• Legal, legally	• Method, methods, methodological, methodologies
• Legislation, legislature, legislative	• Percent
• Meaning, meanings	• Likelihood
• Nondiscretionary	• Probability, probabilistic
• Notice	• Properties
• Order	• Proof, prove, proved
• Orders	• Quantitative, quantitatively, quantify, quantification, quantitative
• Permissible	• Quality, qualitative, qualification, qualify
• Precedent, precedents	• Rational
• Prior	• Rationale
• Previous	• Reason, reasoned, reasons, reasoning
• Provision, provisions	• Reasonable, Reasonably
• Procedure, procedures, procedural	• Record
• Process	• Relevant, relevance
• Proper	• Risk
• Properly	• Science
• Purpose	• Scientific
• Pursuant	• Showing
• Read, reads, readings	• Statement
• Regulation, regulations	• Statistic, statistics, statistical
• Reinterpret, reinterpreted	• Study, studies, studied
• Require, requires, required, requirement	• Substantial, substantially
• Right, rights	• Support, supports, supporting
• Rule, rules	• Sufficient, sufficiently
• Rulemaking	• Technical
• Scope	• Testify, testified, testimony
• Section	• Test
• Silent	• Uncertainty
• Statute, statutes, statutory	• Arbitrary and capricious
• Term, terms	• Substantial evidence
• Text, texts, textual	• Rational basis
• Ultra	• Reasoned decision

• Unreasonable, unreasonably	• Reasonable basis
• Vires	• Basis and purpose
• Vocabulary	• Unwarranted by the facts
• Word, words	•
• In law	•
• Of law	•
• unlawfully withheld	•
• Unreasonably delayed	•
• Abuse of discretion	•
• Accordance with law	•
• Statutory jurisdiction	•
• Statutory right	•
• Procedures required by law	•
• <i>Ultra vires</i>	•

List of cases hand-coded and categorization as involving statutory review, factual review, or both

Case Citation	Factual Review	Statutory Review
113 F.2d 667	Yes	No
115 F.2d 681	No	Yes
119 F.2d 131	Yes	No
119 F.2d 561	Yes	Yes
123 F.2d 90	Yes	Yes
138 F.2d 884	Yes	No
190 F.2d 576	Yes	No
286 F.2d 158	Yes	No
287 F.2d 469	No	Yes
288 F.2d 818	Yes	No
292 F.2d 770	No	Yes
305 F.2d 763	Yes	Yes
308 F.2d 230	Yes	No
310 F.2d 89	Yes	No
311 F.2d 1	Yes	No
317 F.2d 912	Yes	No
325 F.2d 126	Yes	No
326 F.2d 488	Yes	No
331 F.2d 165	Yes	No
336 F.2d 115	Yes	No
336 F.2d 942	Yes	Yes
344 F.2d 47	No	Yes
351 F.2d 771	Yes	Yes
355 F.2d 851	Yes	No
360 F.2d 856	No	Yes
361 F.2d 300	Yes	No
365 F.2d 515	Yes	No
369 F.2d 495	Yes	Yes
375 F.2d 707	Yes	No
376 F.2d 131	Yes	No
379 F.2d 536	Yes	No
379 F.2d 814	Yes	No
383 F.2d 466	Yes	Yes
385 F.2d 981	No	Yes
390 F.2d 304	Yes	No
391 F.2d 713	Yes	No
391 F.2d 961	Yes	No
394 F.2d 84	No	Yes
395 F.2d 622	Yes	No
397 F.2d 801	Yes	No
404 F.2d 1370	Yes	No

406 F.2d 1306	Yes	No
412 F.2d 37	Yes	Yes
415 F.2d 78	Yes	No
416 F.2d 243	Yes	No
447 F.2d 290	Yes	Yes
463 F.2d 256	No	Yes
469 F.2d 498	Yes	No
489 F.2d 1247	Yes	Yes
500 F.2d 597	Yes	Yes
501 F.2d 191	Yes	Yes
505 F.2d 355	Yes	No
509 F.2d 293	No	Yes
514 F.2d 852	Yes	Yes
531 F.2d 364	Yes	Yes
532 F.2d 902	Yes	Yes
543 F.2d 395	No	Yes
555 F.2d 1046	No	Yes
559 F.2d 1251	No	Yes
562 F.2d 827	Yes	No
566 F.2d 696	Yes	No
578 F.2d 361	No	Yes
578 F.2d 880	Yes	No
580 F.2d 1331	Yes	Yes
584 F.2d 408	Yes	Yes
595 F.2d 897	Yes	Yes
598 F.2d 152	No	Yes
601 F.2d 33	Yes	No
601 F.2d 125	Yes	No
613 F.2d 1025	Yes	Yes
616 F.2d 65	Yes	No
619 F.2d 563	Yes	No
628 F.2d 36	No	Yes
628 F.2d 1283	Yes	No
631 F.2d 944	Yes	Yes
635 F.2d 891	Yes	No
657 F.2d 119	No	Yes
666 F.2d 454	No	Yes
675 F.2d 106	No	Yes
677 F.2d 22	Yes	Yes
683 F.2d 858	Yes	No
691 F.2d 953	Yes	Yes
692 F.2d 169	Yes	No
714 F.2d 588	Yes	Yes
727 F.2d 55	Yes	No
745 F.2d 76	No	Yes

745 F.2d 656	No	Yes
759 F.2d 922	No	Yes
760 F.2d 1297	No	Yes
789 F.2d 26	Yes	Yes
790 F.2d 1113	Yes	No
805 F.2d 1050	No	Yes
811 F.2d 149	Yes	Yes
819 F.2d 306	No	Yes
822 F.2d 1203	No	Yes
824 F.2d 332	Yes	No
844 F.2d 867	No	Yes
845 F.2d 345	No	Yes
855 F.2d 108	No	Yes
873 F.2d 884	No	Yes
888 F.2d 132	No	Yes
904 F.2d 172	No	Yes
909 F.2d 186	No	Yes
912 F.2d 1496	No	Yes
921 F.2d 313	No	Yes
938 F.2d 294	No	Yes
952 F.2d 500	Yes	No
953 F.2d 417	Yes	No
955 F.2d 254	Yes	No
955 F.2d 852	Yes	No
969 F.2d 1169	No	Yes
996 F.2d 122	No	Yes
997 F.2d 437	Yes	No
998 F.2d 1051	No	Yes
30 F.3d 169	No	Yes
41 F.3d 1300	Yes	No
41 F.3d 1532	Yes	No
47 F.3d 299	Yes	No
62 F.3d 1484	Yes	No
70 F.3d 1291	No	Yes
71 F.3d 574	No	Yes
84 F.3d 637	Yes	Yes
101 F.3d 772	No	Yes
104 F.3d 573	Yes	No
107 F.3d 882	Yes	No
115 F.3d 248	No	Yes
134 F.3d 125	No	Yes
140 F.3d 1085	No	Yes
156 F.3d 1010	Yes	No
168 F.3d 515	Yes	Yes
171 F.3d 478	No	Yes

193 F.3d 27	Yes	Yes
198 F.3d 139	No	Yes
198 F.3d 899	No	Yes
209 F.3d 760	No	Yes
222 F.3d 1030	Yes	No
234 F.3d 772	No	Yes
237 F.3d 683	No	Yes
250 F.3d 105	No	Yes
281 F.3d 235	No	Yes
282 F.3d 849	Yes	No
301 F.3d 167	Yes	Yes

Summary Statistics for Variables Included in Analyses

Variable	Mean	10 th percentile	25 th percentile	Median	75 th percentile	90 th Percentile	Std. Dev.
<i>Agency Win (dummy)</i>	0.53	0.00	0.00	1.00	1.00	1.00	0.50
<i>Panel Alignment with Agency</i>	0.02	-0.42	-0.20	0.00	0.26	0.42	0.31
<i>Index of Factual Review Language</i>	21.47	4.76	8.86	16.67	28.41	44.13	18.53
<i>Index of Statutory Review Language</i>	39.00	11.12	17.77	31.90	52.68	74.98	28.77
<i>Agency is Appellant (dummy)</i>	0.22	0.00	0.00	0.00	0.00	1.00	0.41
<i>DC Circuit (dummy)</i>	0.26	0.00	0.00	0.00	1.00	1.00	0.44
<i>Agency Alignment with Supreme Court</i>	0.00	-0.18	-0.09	0.00	0.09	0.20	0.14