ARTICLES

Supreme Court Voting Behavior: 1998 Term

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I. Introduction

This Study, the fourteenth in a series,[1] tabulates and analyzes the voting behavior of the United States Supreme Court during the 1998

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1. Professor Robert E. Riggs began this study with *Supreme Court Voting Behavior: 1986 Term*, 2 B.Y.U. J. PUB. L. 15 (1988). Professor Richard G. Wilkins continued the study in *Supreme Court Voting Behavior: 1991 Term*, 7 B.Y.U. J. PUB. L. 1 (1992) [hereinafter *1991 Study*]. The last four studies, analyzing the 1993, 1994, 1995, and 1996 terms, were published in the HASTINGS CONSTITUTIONAL LAW QUARTERLY. *See* Richard G. Wilkins, et al., *Supreme Court Voting Behavior: 1993 Term*, 22 HASTINGS CONST. L.Q. 269 (1995) [hereinafter *1993 Study*]; Richard G. Wilkins, et al., *Supreme Court Voting Behavior: 1994 Term*, 23 HASTINGS CONST. L.Q. 1 (1995) [hereinafter *1994 Study*]; Richard G. Wilkins, et al., *Supreme Court Voting Behavior: 1995 Term*, 24 HASTINGS CONST. L.Q. 1 (1996) [hereinafter *1995 Study*]; Richard G. Wilkins, et al., *Supreme Court Voting Behavior: 1996 Term*, 25 HASTINGS CONST. L.Q. 35 (1997) [hereinafter *1996 Study*]; Richard G. Wilkins, et al., *Supreme Court Voting Behavior: 1997 Term*, 26 HASTINGS CONST. L.Q. 533 (1999) [hereinafter *1997 Study*].

Term.[2] The analysis is designed to determine whether individual Justices and the Court as a whole are voting more "conservatively," more "liberally," or about the same as compared with past Terms. As in politics, whether or not a judicial trend is "conservative" or "liberal" often lies in the eye of the beholder. A lawyer for the American Civil Liberties Union could easily paint an ideological picture of the Court far different from one sketched by a lawyer for Americans United For Life.

This Study attempts to remove this subjectivity by applying the following consistent classification scheme to ten categories of cases across time: "conservative" votes are those that favor an assertion of governmental power, while "liberal" votes are those that favor a claim of individual liberty.[3] By tracking the Term-to-Term conservative or liberal changes in the voting patterns of individual Justices and the Court as a whole across these categories of cases,[4] and by applying standard statistical tests to the resulting data,[5] this study attempts to provide reliable information regarding the current ideological posture of the Court and its members, as well as conclusions and predictions regarding its past and future trends. Whether any statistical study of a process as complex as judicial decision-making can *be* reliable is, of course, open to debate.[6] But, within the limitations inherent in an attempt to "number crunch" ideology, this annual survey offers students and practitioners information useful for assessing how the Court or an individual Justice will vote in particular types of cases.

This Term's survey shows mixed results, but suggests an overall strengthening of liberal voting behavior in most categories. Majority decisions in six of the ten categories (Civil-State Party, Criminal-State Party, Criminal-Federal Party, First Amendment, Statutory Civil

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2. The 1998 Term covers decisions made from October 1998 to July 1999.

3. There is no single, settled definition of conservatism or liberalism. *See generally* M.A. RIFF, DICTIONARY OF MODERN POLITICAL IDEOLOGIES 67-73, 141-52 (1987) (discussing various possible interpretations of the terms). This Study's definitions, however, are close to the core ideals of each ideology. *See id.* at 67 (noting that conservatism "implies fear of sudden and violent changes, respect for established institutions and rulers, support for elites and hierarchies, and a general mistrust of theory as opposed to empirical deductions"); *see also id.* at 142 (asserting that "twentieth-century" liberalism is "compounded of constitutionalism; doubtful of pluralism; certain[] of a belief in the virtues of economic freedom, and less certain[] of a desire to restrict government intervention in most other aspects of life").

4. *See infra* Data Tables 1-10.

5. *See infra* Appendix B.

6. *See infra* note 38.

Rights, and Swing Vote) indicated slight to significant liberal movement. The Statutory Civil Rights category, perhaps the Court's most consistent liberal-movement indicator, showed strengthening in the Court's support of Civil Rights claims. Also, liberal movement in the Study's most reliable category for ideological manifestations of voting behavior[7] – Criminal-State Party – showed slight liberal movement in the majority's overall decisions, and significant liberal movement in unanimous cases (with every unanimous case being decided in favor of the criminal defendant).[8] Yet, perhaps most indicative is the Swing Vote category which indicates that, in ideologically charged cases, the supposed "conservative" Court voted liberally 57.1% of the time, maintaining last Term's liberal inclination.[9] This is the second consecutive year, and the third time in the past five Terms, that the Court has "swung" liberally in close cases, suggesting a liberal shift in the Court's ideological posture.

Of the four categories that showed conservative movement, none are particularly noteworthy. The result in the Equal Protection category, which showed significant conservative movement, is undermined by the fact that the Court only heard one equal protection case this Term.[10] Furthermore, while the Civil-Federal category showed significant conservative movement, (from 36.4% last Term to 61.1% this Term in favor of the federal government), this category ranks next to last in terms of its reliability as an indicator of liberal and conservative ideology.[11] Therefore, this conservative result, although significant, may not be as indicative of a Court-wide trend as the trends identified in other categories. Similarly, the Federalism category, which is the fourth least reliable category for indicating conservative-liberal trends,[12] showed only slight conservative movement (an increase of 4.4 percentage points).[13] Finally, the slight conservative movement in the Jurisdiction Category (a decrease of 3.6 percentage points for decisions favoring the exercise of jurisdiction) is too small to indicate any significant conservative trend in the Court.[14]

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7. *See infra* Part V.
8. *See infra* Data Table 3.
9. *See infra* Data Table 10.
10. *See infra* Data Table 6.
11. *See infra* Part V.
12. *See id.*
13. *See infra* Data Table 9.
14. *See infra* Data Table 6.

Last Term's predictive statistics met with mixed success in forecasting this Term's actual voting patterns. The Study most accurately predicted results for cases involving questions of federal jurisdiction, with an average error of only about 2.97 percentage points per Justice.[15] The least accurate predictions were in the Federalism category, with an average of 18.0 percentage points error per Justice.[16] With respect to individual Justices, this Term's predicted scores were most accurate for Justice Kennedy, with an average[17] error of about 7.24 percentage points.[18] This is a substantial improvement over last Term's frontrunner for predictability (Justice Scalia), whose average error was near 20 percentage points.[19] Following closely behind Justice Kennedy were Justice Thomas, and Chief Justice Rehnquist who deviated an average of only 8.91 and 13.3 percentage points respectively from their predicted scores. The least accurate predictions were for Justice Ginsburg, with an average error of 32.01 percentage points, and Justice Souter, deviating on average 26.34 percentage points. However, the small sample sizes in the First Amendment and Equal Protection categories accounted for a significant portion of the prediction error for almost all the Justices.[20] The "Category" analysis, introduced in the 1996 Study and

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15. *See infra* Data Table 8. The Jurisdiction category was also the category that most closely matched our predictions last Term, with an average deviation of around seven percentage points per Justice. *See 1997 Study, supra* note 1.

16. This excludes both the First Amendment and Equal Protection categories, which, because of the lack of cases dealing with their respective issues, have an uncharacteristically high degree of volatility among the Justices' individual voting patterns, which in turn results in uncharacteristically inaccurate predictions.

17. The average is reached by adding the error between the prediction and this Term's actual result in every category and dividing this sum by the number of categories used. Predictions marked with a "()" could not be calculated using our prediction formula and so were not included in determining the average. For example, Kennedy's predicted score for the 1998 Term in the First Amendment category was "()." Thus, the sum of Kennedy's total deviation in all categories was divided by nine instead of ten. For purposes of this tabulation, only absolute value is used. Thus, a "-52.4" is treated as "52.4" for purposes of computing a Justice's total deviation.

18. Last Term, Justice Kennedy was the least predictable Justice varying an average of over 28 percentage points from the 1996 Term's predictions. *See 1997 Study, supra* note 1.

19. *See 1997 Study, supra* note 1.

20. For example, in the First Amendment category, Justice Scalia erred 100.0 percentage points from last Term's prediction, which accounted for nearly half of his total deviation sum of 221.7 percentage points. Justice Scalia incurred another 65.2 deviation percentage points in the Equal Protection category. Thus, two categories containing a total of three cases accounted for nearly 75% of Justice Scalia's deviation from last Term's predictions. Surely, had these categories been represented with more cases, Justice

included in the Study again this Term, indicates that six categories –
state criminal cases,[21] statutory civil rights,[22] state civil cases,[23] federal
jurisdiction,[24] federal criminal cases,[25] and federalism[26] – are the best
indicators of liberal/conservative predilections among the Justices,
while the remaining categories – First Amendment,[27] federal civil
cases,[28] and Equal Protection[29] – are relatively poor indicators of the
Justices' propensities.[30]

Frontier analysis this Term revealed a generally familiar pattern,
with the Chief Justice reclaiming his accustomed position as the most
conservative member of the court after having been temporarily
displaced by Justice Thomas last Term.[31] Likewise, Justice Stevens
regained his position as the most liberal member of the Court from
Justice Souter, who held the top spot last Term.[32] Perhaps the most
surprising result revealed this Term by our frontier analysis was
Justice Scalia's fifth place showing behind Justices O'Connor and
Kennedy on the conservative frontier.

This Study is divided into sections to make it more accessible to
the reader. The precise details of the statistical analysis – as can be
gleaned from a glance at the equations (and explanations) in
Appendix B – are hardly the stuff of light cocktail conversations. But
one need not have an advanced degree in mathematics to understand
the general trends that flow from the Study's analysis. Part II gives a
description of the mode of analysis employed by the Study. Part III
follows with a general overview of this Term's findings. Part IV sets
out the Study's numerical tables, graphs, and statistical charts and
discusses – table-by-table and chart-by-chart – the information
contained in them. Parts V and VI describe the methodology (and
outcome) of this year's "Category" and "Frontier" Analyses

Scalia's and other Justices' deviation totals and averages would have been significantly
different.

21.   See infra Data Table 3.
22.   See infra Data Table 7.
23.   See infra Data Table 1.
24.   See infra Data Table 8.
25.   See infra Data Table 4.
26.   See infra Data Table 9.
27.   See infra Data Table 5.
28.   See infra Data Table 2.
29.   See infra Data Table 6.
30.   See infra Part V.
31.   See infra Frontier Analysis Table 1 and Frontier Chart 1.
32.   See infra Frontier Analysis Table 2 and Frontier Chart 2.

respectively.   Appendices A and B detail the definitions and statistical tests employed by this Study.

II. Mode of Analysis

The Study is based on the tabulation and mathematical analysis of each Justice's votes in ten categories. Nine of the categories are based on the nature of the issues addressed (e.g., First Amendment, Equal Protection, etc.) or on the character of the parties involved (e.g., state or federal government litigants).[33] The tenth category tabulates the number of times each Justice voted with the majority in cases decided by a single, or swing, vote.

The first nine categories are designed to detect each Justice's attitude toward two broad issues underlying most Supreme Court decisions – protection of individual rights and judicial restraint. The tabulation of votes in each category reveals, in broad strokes, the frequency with which individual Justices and the Court as a whole vote to protect individual rights[34] or exercise judicial restraint.[35]

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33. The categories are as follows: (1) civil controversies in which a state, or one of its officials or political subdivisions, is opposed by a private party; (2) civil controversies in which the federal government, or one of its agencies or officials, is opposed by a private party; (3) state criminal cases; (4) federal criminal cases; (5) First Amendment issues of freedom of speech, press, and association; (6) Equal Protection claims; (7) statutory civil rights claims; (8) issues of federal court jurisdiction, party standing, justiciability, and related matters; and (9) federalism cases.

34. Votes implicating individual rights are tabulated in tables reporting the outcome of state and federal criminal prosecutions (Tables 3 and 4), as well as those detailing the resolution of claims based on the First Amendment (Table 5), the Equal Protection Clause (Table 6), and civil rights statutes (Table 7). The civil cases examined in Tables 1 and 2 also involve individual rights, as these suits pit the government against persons asserting private rights. The federalism decisions tabulated in Table 9 are less obviously relevant to individual rights because such decisions focus on the balance of federal and state authority. Nevertheless, in such cases, the practical effect of voting for the state is to deny federal relief to a party alleging state encroachment upon his or her rights.

35. Jurisdictional questions (Table 8), which exhibit the relative propensity of the Justices to avoid judicial decisions, are perhaps the most direct statistical evidence of judicial restraint. Other Tables included in the Study, however, also provide some indication of the individual Justices' (and the Court's) positions on the "judicial restraint/judicial activism" axis. Judicial restraint is normally identified with deference to the policy-making branches of government, adherence to precedent, avoidance of constitutional bases of decision when narrower grounds exist, respect for the Framers' intent when construing constitutional text, and avoidance of issues rendered unnecessary by the doctrines of ripeness, mootness, political questions, etc. As a result, a vote in favor of individual rights claims (Tables 3, 4, 5, 6, 7) may provide some indication of "judicial activism" because judicial recognition of individual rights often requires the Court to overturn precedent or invalidate an existing statute. Federalism issues (Table 9) are also relevant because judicial restraint is traditionally identified with respect for the role of the states within the federal system.

From the voting patterns that emerge, the Study determines whether individual Justices and the Court are taking "conservative" or "liberal" positions. The Study classifies outcomes that favor an assertion of governmental power as conservative, and outcomes that favor a claim of individual rights as liberal. Accordingly, the Study classifies as conservative a vote for the government against an individual, a vote against a claim of constitutional or statutory rights, a vote against the exercise of jurisdiction, or a vote favoring state (as opposed to federal) authority on federalism questions. The Study classifies all contrary votes as liberal.

This analytical scheme is not perfect. Unanimous decisions (a significant portion of all cases decided by the Court) are included in the Study's calculations even though liberal or conservative ideology may not have influenced the outcome of such cases. Unanimous opinions often result when either the law or the facts, or both, point so clearly in one direction that ideology is not a decisional factor. Furthermore, concern for individual rights is not always, or even necessarily, the attitudinal opposite of judicial restraint.

Despite these difficulties with our classification scheme, the basic assumption that supports this Study – that the general orientation of individual Justices and the Court to individual rights and judicial restraint is suggestive of conservative or liberal ideology – appears sound.[36] For example, deference to legislatures frequently results in rejection of an individual's claim, especially one predicated upon the impropriety of governmental action.[37] Judicial restraint is associated with a reluctance to read new rights into the Constitution or a statute.[38] Refusal to exercise federal jurisdiction leaves the matter to state courts with their possible bias in favor of state governmental action and is a clear rebuff to the claimant seeking federal protection of rights.[39] Therefore, to the extent the Study's basic ideological assumptions regarding liberal and conservative outcomes are

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36. *See supra* text accompanying note 3; *see also* category analysis discussion *infra* Part V.

37. *See, e.g.,* Miller v. Albright, 523 U.S. 420, 440-44 (1998) (holding that Congress's proof of paternity requirement for citizenship by birth whenever the citizen parent of a child born out of wedlock abroad is the child's father, as opposed to the mother, does not represent unconstitutional denial of equal protection based on the sex of the citizen parent).

38. *See id.*

39. *See, e.g.,* Rivet v. Regions Bank of La., 522 U.S. 470, 478 (1998) (holding that claim preclusion by reason of a prior federal judgment is a defensive plea that provides no ground for removal of state law claims based on federal question jurisdiction).

accurate, it is possible to identify trends by tracking the voting patterns reflected in Data Tables 1 through 10.

To reckon current ideological positions within the Court, votes of the individual Justices can be compared with those cast by other Justices this Term, as well as with the outcomes for the 1989 through 1997 Terms. Likewise, the current ideological position of the Court as a whole can be determined by comparing present outcomes for the Court majority with those of prior Terms. In Data Tables 1-10, this information appears in the form of voting percentages for each Justice and for the Court majority. Charts 1-10, in turn, graphically depict the Court's voting trends revealed in the tables.

Mean Tables 1-10 and Regression Tables 1-10 analyze the voting patterns of the individual Justices. The purpose of these tables is to determine whether a Justice's 1998 Term voting record departs in a statistically significant manner from his or her prior voting pattern and whether any significant correlation exists among the Term-to-Term voting patterns of the Justices.[40]

Finally, Frontier Analysis Tables 1-4 and Frontier Charts 1-4 compare the Justice's conservative and liberal predilections this Term and over the course of the entire Study. Frontier analysis[41] mitigates some of the analytical difficulties previously discussed by measuring the strength of each Justice's tendencies relative to the rest of the Court with respect to the cases actually presented in a given Term rather than against any absolute scale.

All of these data and statistics must be interpreted with caution. The percentages and statistical results revealed on each table are affected not only by the dispositions of the individual Justices but also by the nature of the cases decided each Term. Furthermore, Supreme Court cases are not the result of random selection, and the universe of votes cast by the Justices is relatively small. Since both random sampling and large sample size are crucial elements of any fully reliable statistical analysis, conclusions drawn from this Study are not beyond dispute. There are obvious limitations to any empirical analysis of a subjective decision making process.[42]

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40. *See infra* Appendix B.

41. *See id.*

42. The general reliability of statistical inference depends on random sampling. *See generally* ALLEN T. CRAIG & ROBERT V. HOGG, INTRODUCTION TO MATHEMATICAL STATISTICS 157-58 (1995); RAYMOND H. MYERS, CLASSICAL AND MODERN REGRESSION WITH APPLICATIONS 9-11 (1990). The Court's method of selecting cases is far from random. Rather, it is the result of a conscious decisional process. Reliable statistics generally require large quantities of information to produce reliable results. As

In light of these caveats, one might ask whether this Study is worth either conducting or reading. We believe it is. For years, experienced Supreme Court practitioners have attempted to divine the ideological predilections of individual Justices in framing their arguments to the Court. Moreover, both the media and academicians are fond of attaching ideological labels to the Court and its personnel. Supreme Court practitioners, legal scholars, and the public have long assumed that assessments of Court ideology are valuable – even though such assessments may be based upon little more than the gut reactions of the attorneys, scholars, and news reporters involved. This Study, based upon a systematic methodology for objectively gathering, quantifying, and analyzing data over time, should be more reliable than such ad hoc assessments.

III. Overview of the Ideological Trends of the 1998 Term

This Term suggests a slight strengthening of last Term's liberal results with minor conservative movement in only four of the ten categories. Contrasting with any conservative indicators is the Court's repeated favoritism for liberal outcomes in ideologically contended cases decided by one vote. Furthermore, liberal support favoring statutory civil rights claims continued to rise, and the Study's most reliable category for indicating liberal-conservative trends – Criminal-State Party – shows liberal movement for the first time since the 1996 Term. An overview of the results in each individual category follows. A more in-depth analysis for each category is set forth in Part IV. B. of this Study.

Data Table 1, Civil Party versus State Government – Although the Court almost doubled the number of civil cases it decided involving state parties this Term, its treatment of such cases remained constant, finding for the government 44.8% of the time. Additionally, there was no significant change in the conservative to liberal ordering of the Justices. However, the number of split decisions decided in favor of state parties in this category increased, suggesting a slight conservative shift in favor of State parties.

Data Table 2, Civil Party versus Federal Government – During the 1998 Term, the Court was much more conservative in its treatment of the federal government in civil cases, finding for the

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sample sizes become larger, inferences become more accurate. This Study is subject to sampling bias, both because the sample is not random and because it is comparatively small. The statistical inferences below, therefore, may not accurately represent a Justice's (or the Court's) views.

federal government more often than last Term in "Majority," "Split," and "Unanimous" decisions. Likewise, each Justice increased support of the federal government in civil cases over last Term, and four of the Justices exhibited a statistically significant change in voting behavior. Interestingly, historically liberal Justices Ginsburg and Stevens were the most supportive of the federal government in this category, and historically conservative Chief Justice Rehnquist was the least supportive of the federal government.

Data Table 3, Criminal Party versus State Government – Data Table 3 demonstrates decreased favor for the states in criminal cases during the 1998 Term.[43] Although the Court continued to vote for the state in a majority of cases, the 1998 Term voting record indicates a slight liberal trend. This trend is evidenced not only in the "Unanimous" and "Majority" votes, but also by a decrease in the individual score of each Justice. The order of the Justices remained the same, however, with Justice Thomas favoring the government in 80% of the decisions and Justice Stevens voting for the government only 9.1% of the time.

Data Table 4, Criminal Party versus Federal Government – The slight liberal trend detected in this category by the 1997 Term data has continued. Table 4 indicates that, during the 1998 Term, the Court voted in favor of the Federal Government less often in all three categories of decisions –"Majority," "Split," and "Unanimous." In fact, the Court has only received a lower score in the "Majority" category two times in the last ten Terms. The liberal trend in this category is also evidenced in the individual Justices' records, with all but two Justices voting less often in favor of the government. Despite this liberal trend, a majority of the cases were still decided in favor of the government.

Data Table 5, First Amendment; Data Table 6, Equal Protection – The 1998 Term, like the 1997 Term, included very few cases falling within the First Amendment and Equal Protection categories. The Supreme Court addressed only two First Amendment claims and one Equal Protection claim. Such limited data makes it difficult, if not impossible, to detect ideological trends or positions in these two

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43. Cases decided in favor of the states: Calderon v. Coleman, 525 U.S. 141 (1998); Florida v. White, 526 U.S. 559 (1999); Maryland v. Dyson, 527 U.S. 465 (1999); O'Sullivan v. Boerckel, 526 U.S. 838 (1999); Stewart v. LaGrand, 526 U.S. 1001 (1999); Wyoming v. Houghten, 526 U.S. 295 (1999). Cases decided against the states: City of Chicago v. Morales, 527 U.S. 41 (1999); Knowles v. Iowa, 525 U.S. 113 (1998); Lilly v. Virginia, 527 U.S. 116 (1999). In *Strickler v. Green*, 527 U.S. 263 (1999), the Court addressed two issues and decided for the state on one issue and against the state on the other.

categories, based on this data alone. However, a few results are worth noting. The First Amendment, which we have described as "faring poorly"[44] the last two Terms, did well this Term with all issues being decided in favor of the First Amendment claim. Also noteworthy in the First Amendment category is the voting record of individual Justices, with historically conservative Justices Scalia and Thomas voting liberally and typically liberal Justice Breyer voting conservatively. In the Equal Protection category, the slightly liberal trend indicated by the 1997 Term did not continue as the Court voted unanimously against the claim in this Term's single Equal Protection case. The claim addressed this Term was the first the Court has been able to unanimously agree upon since 1991.

Data Table 7, Statutory Civil Rights – Following the liberal trend of the past three Terms, the Majority once again increased its support of statutory civil rights claims. Similarly, the percentage of split and unanimous decisions in favor of civil rights claims also increased. The ordering of the Justices was typical, ranging from Justice Stevens as the most supportive to Justice Thomas as the least supportive of civil rights claims.

Data Table 8, Jurisdiction – The Court accepted 55.0% of all claims for the exercise of jurisdiction. This percentage closely hovers around the Majority's average for the past decade with only a slight change from last Term. Significant conservative movement can be detected in the non-unanimous (or "Split") decision cases, which are perhaps more ideologically charged cases. On the other hand, cases decided unanimously showed a slight liberal movement. Individual Justices also closely matched past performances with no Justices evidencing a statistically significant change in voting behavior.

Data Table 9, Federalism – Despite this Term's widely publicized "resurgence" of States' rights jurisprudence, this Study showed that the Majority's average for decisions favoring the States is still a predominantly liberal 36.0%, a figure only slightly more conservative than last Term. Furthermore, State-supporting decisions in non-unanimous (or "Split") cases barely increased and unanimous decisions remained exactly the same. Overall, the Court's decisions reflect only trivial conservative movement. On the other hand, voting behavior of individual Justices reflected more radical change, with one-third of the Court evidencing voting behavior that varied significantly from past Terms. Furthermore, voting behavior this

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44. *See 1997 Study, supra* note 1; *see also 1996 Study, supra* note 1, at 91, Table 5.

Term suggests that, in the Federalism category, individual Justices may be becoming more polarized in their ideological stances.

Data Table 10, Split Decisions – This Term almost matched last Term's results with both conservative and liberal outcomes varying less than one percent from the 1997 Term.   Liberal outcomes were reached 57.1% of the time and conservative outcomes resulted the remaining 42.9% of the time.   The gap between liberal and conservative outcomes is predicted to increase next Term with a forecasted 62.5% of the swing-vote cases being decided liberally. Justice O'Connor occupied the position typically occupied by Justice Kennedy, voting more often with the majority than any other Justice. The Study also showed extremely accurate predictions for the voting behavior of nearly one-half the Court.   It remains to be seen whether liberal outcomes in ideologically sensitive cases is a strengthening trend.

IV. The 1998 Term Voting Record

This Study seeks to quantify several characteristics of Supreme Court voting behavior by analyzing the Court's voting record.   We examine voting trends, patterns, and mean voting percentages both for individual Justices and for the Court as a whole.[45]   Subpart A below explains, in simple fashion, the numerical and statistical tests used in this Study, and their representation in the charts and graphs that follow.[46]   Subpart B provides a categorical analysis of significant trends and patterns present in the data.

A. The Data

Data Tables 1 through 10 set out the Term-by-Term voting scores for each Justice, the breakdown of votes contributing to 1998 Term scores, our predicted 1999 Term scores, the prediction error, and our predicted scores for the 1998 Term.   Scores are simply the percentage of decisions in which a Justice voted in favor of the party or claim indicated in each table's title.   Predictions are based on an ARIMA[47] forecasting model.   The bottom three rows of each Data Table contain scores for the Court as a whole and are broken down

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45. Our ability to analyze newer Justices' voting patterns may be restricted or precluded in some instances due to insufficient data.

46. For additional information regarding our methods of analysis, *see infra* Appendix B.

47. ARIMA stands for AutoRegressive, Integrated Moving-Average.   For more information on this procedure, *see infra* Appendix B.

into three categories. "Majority all Cases" summarizes the Court's disposition of all decisions involving the indicated party or claim, while "Split Decision" and "Unanimous" summarize only those decisions reached by a divided[48] or unanimous Court respectively.

Charts 1 through 10 display, in graphical form, the Court's voting record in each category over the course of the Study. The "Majority All Cases" line reveals trends in the Court's disposition of cases within the indicated category from one Term to the next. The "Split Decisions" line is perhaps more interesting because it includes only those cases in which Justices disagreed with one another and so may provide a better indication of the Court's "balance" in each category. The "Unanimous" line rounds out the information presented by showing the outcome of cases in which there was no ideological division.

Mean Tables 1 through 10 set out the mean of all scores recorded for each Justice during the last ten Terms of this Study (1989-1998). Also shown are the 99% confidence interval for the true mean, the standard deviation of the scores, and the 1997 Term scores. The final column indicates whether 1998 Term scores differ in a statistically significant way from the Justice's past mean scores.

Finally, Regression Tables 1 through 10 show Pearson correlations and adjusted r^2 statistics relating the Justices' Term-to Term voting patterns. The r^2 statistic is a more reliable indicator of correlation than the Pearson statistic. A high positive correlation between Justices does not indicate that they vote together, but rather that their Term-to-Term scores tend to move in similar directions. In fact, this statistic may provide more information regarding the nature of the cases decided each Term than it does regarding the Court's voting behavior. Although some general indications of bloc voting behavior might be deduced from this information, more reliable information can be gleaned from our swing vote analysis[49] and frontier analysis.[50] For this reason, we devote only minimal discussion to the correlation statistic this Term, but continue to include the data in order to maintain consistency with information provided by the Study in prior Terms.

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48. A "divided Court" here means that at least one Justice did not agree with the Majority. In other words, "Split Decision" cases are all those that are not unanimous.

49. *See infra* Data Table 10.

50. *See infra* Part VI and Appendix B.

Data Table 1

Civil Cases: State Government Versus a Private Party

Justice	% Votes for Government									X_2 1998 Term	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Gov't	Against Gov't	Prediction 1998	Error	Prediction 1999
Rehnquist	70.3	84.0	71.4	52.8	68.2	60.0	43.8	84.9	60.0	65.5	19	10	63.0	2.5	58.3
Thomas*	27.0	28.0	71.4	41.7	45.5	55.0	67.4	77.4	60.0	65.5	19	10	61.5	4.0	59.5
O'Connor	67.6	68.0	50.0	50.0	40.9	40.0	47.1	68.8	53.3	55.2	16	13	81.3	-26.1	53.5
Scalia	64.9	64.0	64.3	41.7	50.0	60.0	52.9	77.4	60.0	55.2	16	13	51.6	3.6	58.8
Kennedy	61.1	76.0	42.9	41.7	40.9	40.0	41.2	71.9	53.3	51.7	15	14	51.2	0.5	55.0
Breyer*	43.2	24.0	35.7	30.3	42.9	42.1	29.4	54.6	46.7	44.8	13	16	0	0	46.5
Souter*	27.0	63.6	52.5	36.4	45.5	35.0	29.4	54.6	46.7	37.9	11	18	53	-15.1	37.6
Ginsburg*	59.5	64.0	59.5	51.4	40.9	50.0	35.3	53.1	46.7	31.0	9	20	40.4	-9.4	44.0
Stevens	40.5	36.0	29.3	31.3	27.3	42.1	23.5	48.5	37.5	17.2	5	24	43.6	-26.4	34.0
Majority	51.4	64.0	52.4	41.7	40.9	45.0	52.9	72.7	46.7	44.8	13	16	53.2	-8.4	42.8
Split	52.4	68.8	51.6	44.4	46.2	45.5	72.7	69.2	33.3	47.1	8	9			
Unanimous	50.0	55.6	54.6	38.9	33.3	44.4	16.7	75.0	55.6	41.7	5	7			

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* Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

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Chart 1

Civil Cases: State Government Versus a Private Party

Mean Table 1

Civil Cases: State Government Versus a Private Party

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X₂)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	52.4	+/- 10.0	12.87	51.72	no
O'Connor	54.8	+/- 7.7	10.31	55.17	no
Rehnquist	66.8	+/- 8.7	11.68	65.52	no
Scalia	59.2	+/- 6.8	9.17	55.17	no
Stevens	36.3	+/- 5.6	7.52	17.24	yes
Breyer*	43.2	+/- 13.6	10.53	44.83	no
Ginsburg*	45.2	+/- 8.2	7.15	31.03	yes
Thomas*	59.8	+/- 12.9	13.29	65.52	no
Souter*	45.4	+/- 10.4	11.42	37.93	no

( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

Regression Table 1

Civil Cases: State Government Versus a Private Party

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor	0.93/0.85							
Rehnquist	0.77/0.56							
Scalia			0.71/0.46					
Stevens								
Breyer*	0.84/0.60	0.71/0.35	0.95/0.86	0.81/0.55				
Ginsburg*				0.74/0.43	0.99/0.98			
Thomas*				0.82/0.62				
Souter*	0.77/0.54	0.70/0.42	0.90/0.79			0.92/0.80		

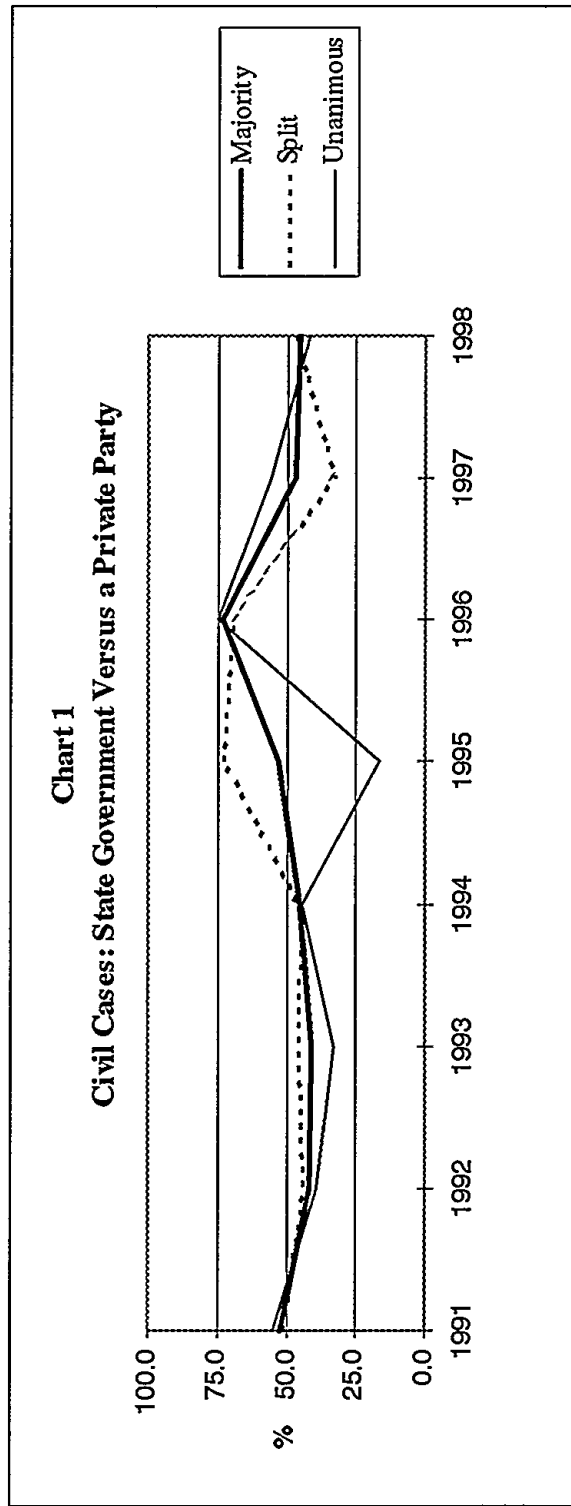( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Data Table 2

Civil Cases: Federal Government Versus a Private Party

Justice	% Votes for Government									X2	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Gov't	Against Gov't	Prediction 1998	Error	Prediction 1999
O'Connor	60.7	60.0	52.4	62.5	56.3	27.8	62.5	59.1	61.9	73.3	11	4	51.7	21.6	65.2
Stevens	57.1	40.0	57.1	34.4	70.6	68.4	63.2	65.2	55.0	68.4	13	6	0	0	64.2
Ginsburg*	75.0	70.0	81.0	69.7	58.8	52.6	85.0	65.2	40.9	68.4	13	6	66.4	2.0	51.1
Souter*	53.8	55.6	71.4	70.0	76.5	42.1	75.0	69.6	47.6	66.7	12	6	42.2	24.5	51.2
Scalia	60.7	57.9	71.4	67.7	52.9	42.1	60.0	45.5	52.4	61.1	11	7	63.3	-2.2	52.0
Breyer*	64.3	60.0	57.1	48.5	68.8	47.4	60.0	73.9	57.1	61.1	11	7	58.2	2.9	65.0
Thomas*	50.0	53.0	53.3	64.5	47.1	42.1	65.0	40.9	33.3	55.6	10	8	49.8	5.8	0
Kennedy	60.7	55.6	76.2	70.0	52.9	47.4	80.0	63.6	45.5	50.0	9	9	62.9	-12.9	53.9
Rehnquist	78.6	70.0	71.4	74.2	58.8	52.6	75.0	69.6	38.1	50.0	9	9	29.8	20.2	49.6
Majority	71.4	60.0	81.0	66.7	52.9	42.1	75.0	69.6	36.4	61.1	11	7	63.1	-2.0	48.1
Split	66.7	60.0	83.3	76.5	42.8	33.3	63.6	69.2	26.7	50.0	5	5			
Unanimous	76.9	60.0	77.8	56.3	60.0	57.1	88.9	70.0	57.1	75.0	6	2			

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

Chart 2

Civil Cases: Federal Government Versus a Private Party

Mean Table 2
Civil Cases: Federal Government Versus a Private Party

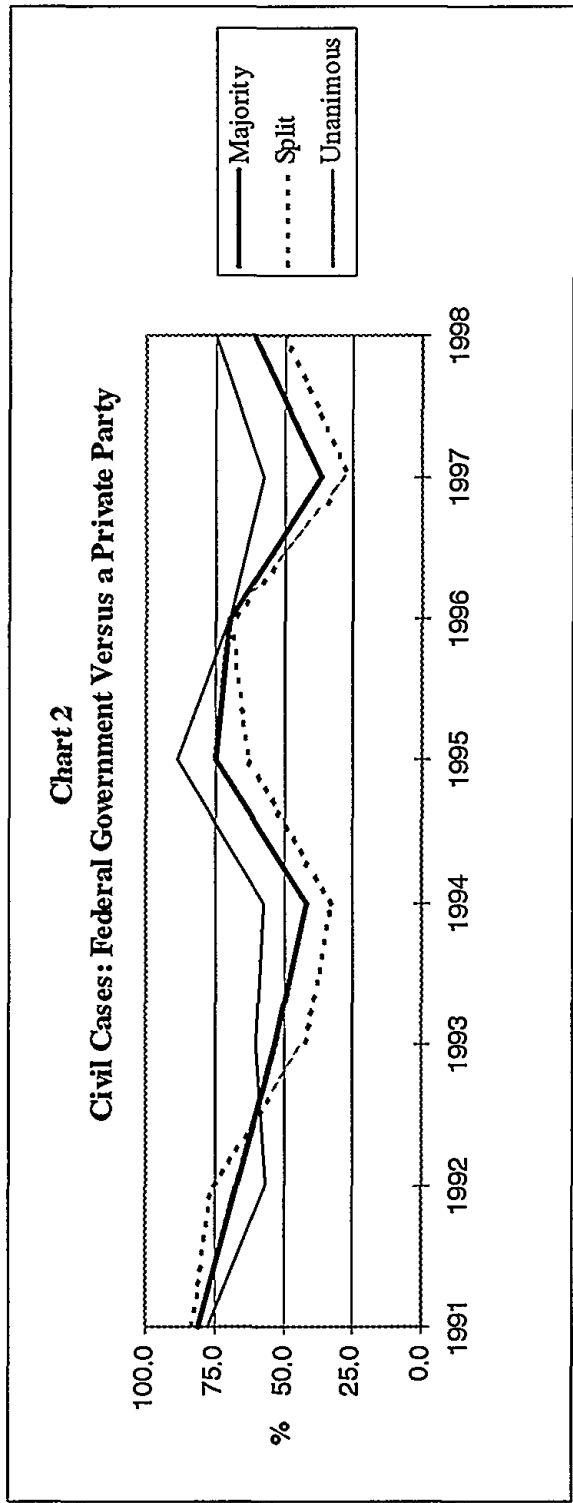| Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	61.5	+/- 8.6	11.13	50.00	yes
OConnor	59.6	+/- 9.0	12.15	73.33	yes
Rehnquist	67.7	+/- 10.0	13.46	50.00	yes
Scalia	59.6	+/- 8.3	11.12	61.11	no
Stevens	55.0	+/- 8.5	11.38	68.42	yes
Breyer*	59.6	+/- 14.1	10.96	61.11	no
Ginsburg*	60.5	+/- 18.8	16.36	68.42	no
Thomas*	49.5	+/- 11.8	12.08	55.56	no
Souter*	63.5	+/- 12.0	13.17	66.67	no

() = no data available or could not calculate with available data
* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Regression Table 2

Civil Cases: Federal Government Versus a Private Party

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor								
Rehnquist	0.80/0.60							
Scalia			0.83/0.62					
Stevens								
Breyer*								
Ginsburg*	0.86/0.68							
Thomas*	0.71/0.43			0.71/0.42			0.92/0.81	
Souter*						0.73/0.38	0.73/0.42	

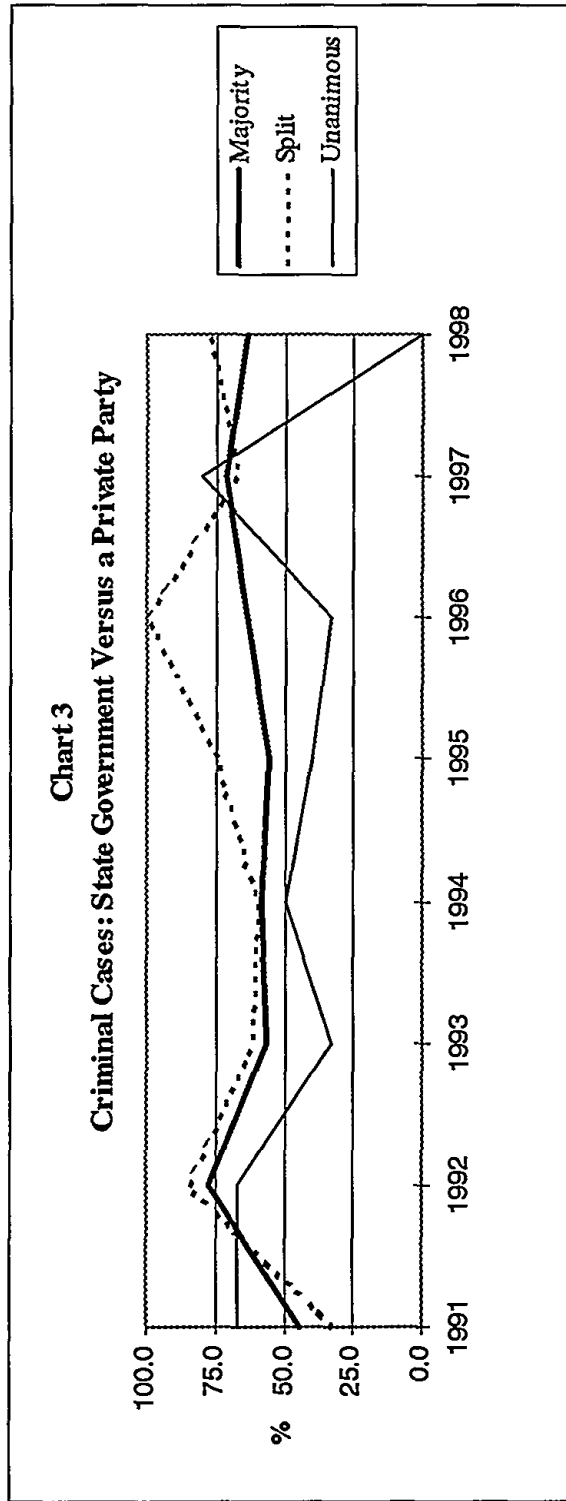() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

Data Table 3

Criminal Cases: State Government Versus a Private Party

Justice	% Votes for Government								X2		1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Gov't	Against Gov't	Prediction 1998	Error	Prediction 1999
Thomas*	8.8	0.0	75.0	85.7	87.5	91.7	66.7	63.6	92.3	80.0	8	2	63.5	16.5	80.2
Rehnquist	85.3	81.5	66.7	90.0	81.3	91.7	66.7	63.6	76.9	72.7	8	3	72.4	0.3	76.1
Scalia	73.5	74.1	77.8	86.4	81.3	83.3	55.6	63.6	84.6	72.7	8	3	57.0	15.7	78.1
O'Connor	76.5	66.7	33.3	66.7	68.8	58.3	44.4	63.6	71.4	63.6	7	4	70.6	-7.0	59.4
Kennedy	73.5	57.7	50.0	77.3	50.0	75.0	55.6	54.6	76.9	54.6	6	5	66.3	-11.8	61.6
Breyer*	33.3	14.8	33.3	25.0	12.5	41.7	22.2	36.4	50.0	36.4	4	7	72.3	-35.9	58.0
Souter*	11.8	68.0	55.6	55.0	25.0	41.7	22.2	54.6	57.1	36.4	4	7	0	0	43.2
Ginsburg*	73.5	48.1	55.6	75.0	43.8	41.7	33.3	45.5	42.9	27.3	3	8	43.3	-16.0	36.0
Stevens	20.6	0.0	27.8	31.8	25.0	8.3	22.2	18.2	23.1	9.1	1	10	22.8	-13.7	20.6
Majority	64.7	55.6	44.4	77.3	56.3	58.3	55.6	63.6	71.4	63.6	7	4	67.6	-4.0	64.8
Split	70.0	68.2	33.3	84.6	61.5	60.0	75.0	100.0	66.7	77.8	7	2			
Unanimous	25.0	0.0	66.6	66.7	33.3	50.0	40.0	33.3	80.0	0.0	0	2			

() = no data available or could not calculate with available data
* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Chart 3

Criminal Cases: State Government Versus a Private Party

Mean Table 3

Criminal Cases: State Government Versus a Private Party

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	65.6	+/- 9.4	12.08	54.55	yes
O'Connor	63.7	+/- 9.9	13.29	63.64	no
Rehnquist	79.2	+/- 7.2	9.64	72.73	yes
Scalia	73.9	+/- 9.1	12.25	72.73	no
Stevens	21.4	+/- 7.3	9.76	9.09	yes
Breyer*	37.6	+/- 15.0	11.68	36.36	no
Ginsburg*	41.4	+/- 5.5	4.74	27.27	yes
Thomas*	80.4	+/- 11.6	11.87	80.00	no
Souter*	47.4	+/- 14.9	16.32	36.36	no

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Regression Table 3

Criminal Cases: State Government Versus a Private Party

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor								
Rehnquist								
Scalia								
Stevens								
Breyer*	0.76/0.44	0.90/0.75		0.92/0.79				
Ginsburg*								
Thomas*			0.83/0.64	0.89/0.77		0.78/0.47		
Souter*						0.84/0.60		

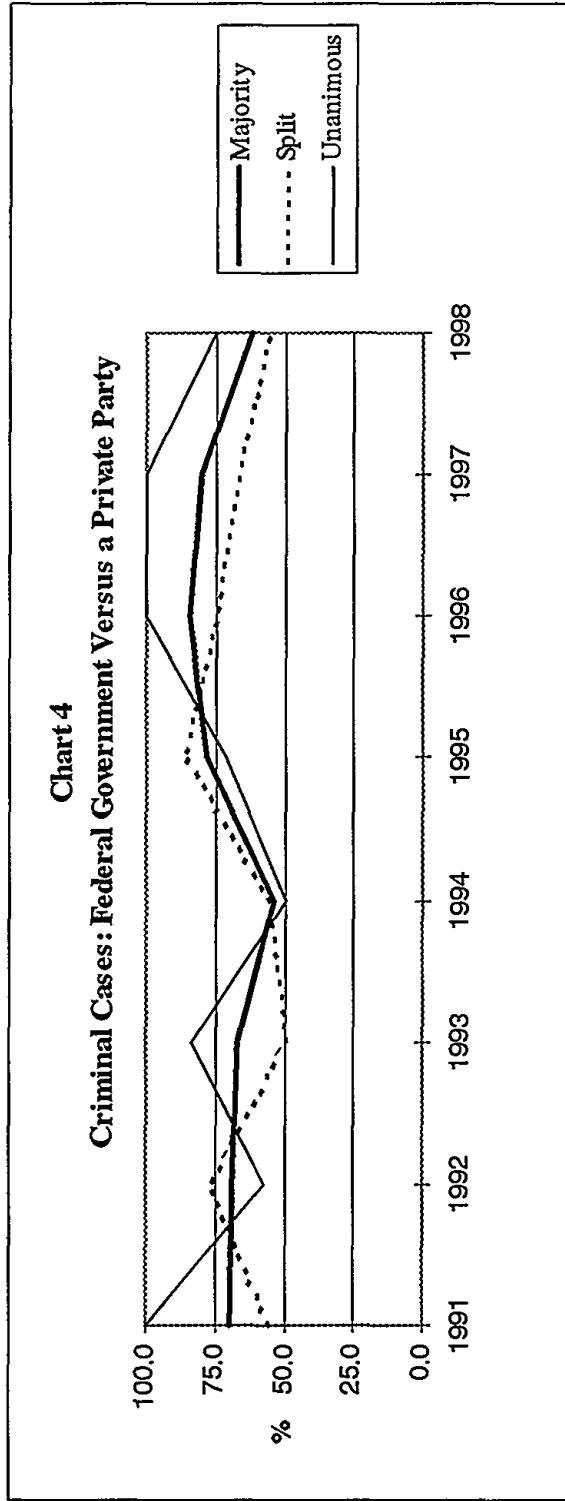( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Data Table 4

Criminal Cases: Federal Government Versus a Private Party

Justice	% Votes for Government									X2 1998 Term	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Gov't	Against Gov't	Prediction 1998	Error	Prediction 1999
O'Connor	77.8	70.0	76.9	75.0	75.0	69.2	71.4	92.3	80.0	84.6	11	2	80.4	4.2	81.9
Kennedy	66.7	50.0	84.6	60.0	66.7	61.5	71.4	84.6	90.0	76.9	10	3	93.7	-16.8	79.8
Rehnquist	77.8	70.0	76.9	81.3	83.3	69.2	71.4	84.6	70.0	76.9	10	3	78.2	-1.3	71.4
Thomas*	11.1	50.0	54.6	81.3	88.3	61.5	71.4	84.6	90.0	61.5	8	5	73.9	-12.4	0
Breyer*	44.4	70.0	61.5	46.7	58.3	69.2	71.4	69.2	70.0	53.9	7	6	78.3	-24.5	56.5
Ginsburg*	77.8	60.0	69.2	56.3	58.3	61.5	71.4	76.9	60.0	53.9	7	6	0	0	56.4
Scalia	66.7	40.0	76.9	62.5	66.7	53.9	78.6	92.3	70.0	46.2	6	7	73.9	-27.8	64.4
Souter*	11.1	75.0	69.2	43.8	58.3	61.5	78.6	84.6	70.0	46.2	6	7	85.1	-39.0	39.0
Stevens	33.3	60.0	38.5	26.7	50.0	30.8	50.0	53.9	55.6	38.5	5	8	45.5	-7.0	45.9
Majority	66.7	60.0	69.2	68.8	66.7	53.9	78.6	84.6	80.0	61.5	8	5	77	-15.5	69.8
Split	83.3	50.0	55.6	77.8	50.0	55.6	85.7	75.0	66.7	55.6	5	4			
Unanimous	33.3	75.0	100.0	57.1	83.3	50.0	71.4	100.0	100.0	75.0	3	1			

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Chart 4

Criminal Cases: Federal Government Versus a Private Party

Mean Table 4

Criminal Cases: Federal Government Versus a Private Party

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	72.4	+/- 10.2	13.12	76.92	no
O'Connor	77.2	+/- 5.5	7.34	84.62	yes
Rehnquist	78.3	+/- 5.1	6.84	76.92	no
Scalia	67.4	+/- 9.6	12.86	46.15	yes
Stevens	47.5	+/- 10.0	13.41	38.46	yes
Breyer*	70.0	+/- 1.3	1.02	53.85	yes
Ginsburg*	65.6	+/- 9.3	8.10	53.85	yes
Thomas*	76.0	+/- 13.4	13.79	61.54	yes
Souter*	67.6	+/- 11.7	12.89	46.15	yes

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Regression Table 4

Criminal Cases: Federal Government Versus a Private Party

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor								
Rehnquist								
Scalia								
Stevens				0.90/0.75				
Breyer*								
Ginsburg*					0.72/0.45	0.83/0.58	0.94/0.85	
Thomas*								
Souter*								

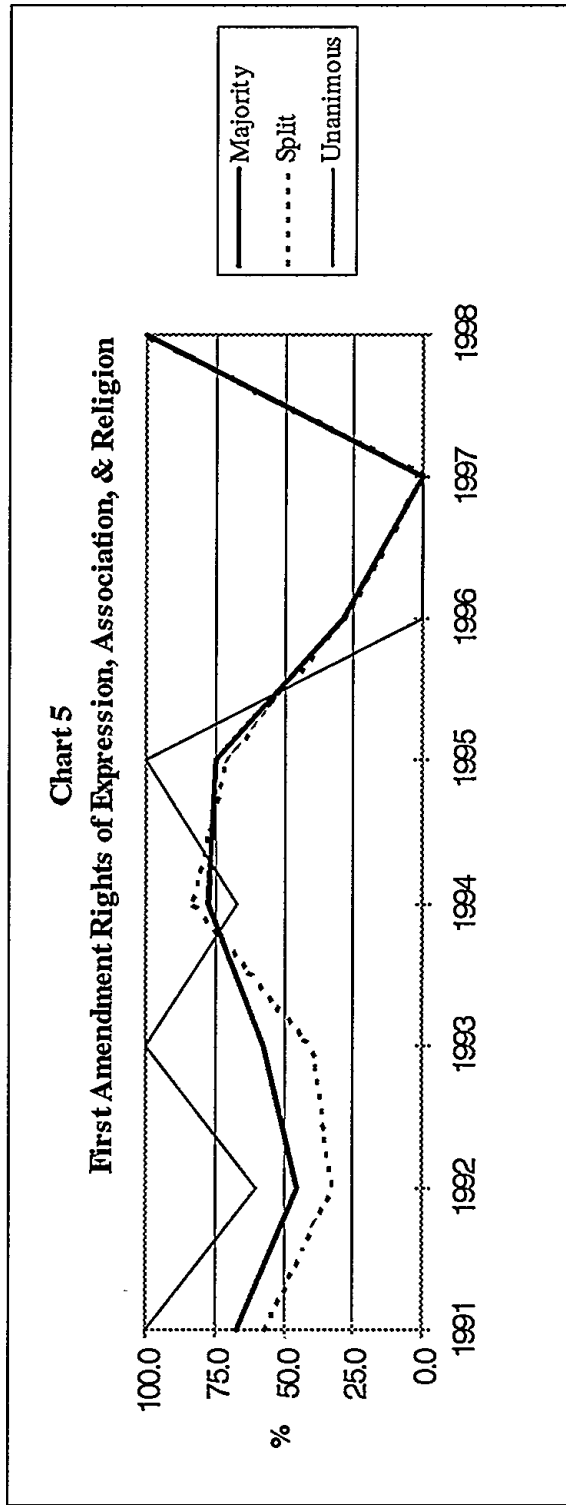( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

    Justice Thomas replaced Justice Marshall in 1991

    Justice Ginsburg replaced Justice White in 1993

    Justice Breyer replaced Justice Blackmun in 1994

Data Table 5

First Amendment Rights of Expression, Association, and Religion

Justice	% Votes for Rights Claim										X_2	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	1998 Term	For Claim	Against Claim	Prediction 1998	Error	Prediction 1999
Kennedy	40.0	41.7	77.8	77.8	71.4	88.9	87.5	57.1	0.0	100.0	100.0	4	0	100.0	0.0	65.1
Scalia	26.7	25.0	37.5	45.5	85.7	55.6	37.5	85.7	0.0	100.0	100.0	4	0	0.0	100.0	32.0
Stevens	46.7	50.0	100.0	90.0	57.1	66.7	62.5	42.9	0.0	100.0	100.0	4	0	13.7	86.3	49.4
Ginsburg*	20.0	15.4	50.0	36.4	71.4	66.7	75.0	57.1	0.0	100.0	100.0	4	0	0.0	100.0	0.0
Thomas*	73.3	61.5	20.0	40.0	85.7	66.7	37.5	85.7	0.0	100.0	100.0	4	0	81.6	18.4	0
Souter*	73.3	61.5	20.0	40.0	85.7	66.7	37.5	57.1	100.0	100.0	100.0	4	0	13.1	86.9	99
O'Connor	26.7	54.5	77.8	36.4	57.1	66.7	62.5	28.6	0.0	50.0	50.0	2	2	0	0	43.7
Rehnquist	13.3	16.7	50.0	36.4	42.9	55.6	62.5	28.6	0.0	50.0	50.0	2	2	0.0	50.0	45.6
Breyer*	50.0	69.2	88.9	90.0	71.4	66.7	75.0	14.3	0.0	50.0	50.0	2	2	0	0	0.0
Majority	40.0	25.0	66.7	45.5	57.1	77.8	75.0	28.6	0.0	100.0	100.0	4	0	9.9	90.1	44.4
Split	40.0	30.0	57.1	33.3	40.0	83.3	71.4	28.6	0.0	100.0	100.0	2	0			
Unanimous	40.0	0.0	100.0	60.0	100.0	66.7	100.0	0.0	0.0	100.0	100.0	2	0			

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

Chart 5

First Amendment Rights of Expression, Association, & Religion

Mean Table 5

First Amendment Rights of Expression, Association and Religion

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	58.8	+/- 20.9	26.89	100.00	yes
O'Connor	42.0	+/- 16.7	22.49	50.00	no
Rehnquist	29.8	+/- 14.4	19.43	50.00	yes
Scalia	42.4	+/- 18.0	24.18	100.00	yes
Stevens	56.7	+/- 18.5	24.90	100.00	yes
Breyer*	39.0	+/- 48.2	37.39	50.00	no
Ginsburg*	54.0	+/- 35.7	30.95	100.00	yes
Thomas*	47.9	+/- 31.9	32.80	100.00	yes
Souter*	58.6	+/- 23.9	26.20	100.00	yes

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Regression Table 5

First Amendment Rights of Expression, Association, and Religion

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor	0.74/0.50							
Rehnquist	0.90/0.79	0.81/0.62						
Scalia								
Stevens	0.81/0.62		0.71/0.45					
Breyer*	0.86/0.65	0.97/0.91	0.96/0.90		0.74/0.39			
Ginsburg*	0.97/0.92	0.82/0.60	0.87/0.70	0.80/0.56	0.97/0.94	0.74/0.39		
Thomas*				0.98/0.94			0.81/0.58	
Souter*								

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990

  Justice Thomas replaced Justice Marshall in 1991

  Justice Ginsburg replaced Justice White in 1993

  Justice Breyer replaced Justice Blackmun in 1994

Data Table 6

Equal Protection Claims

Justice	% Votes for Rights Claim									X2	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Claim	Against Claim	Prediction 1998	Error	Prediction 1999
Kennedy	25.0	42.9	50.0	20.0	100.0	66.7	80.0	33.3	50.0	0.0	0	1	0	0	32.4
O'Connor	25.0	28.6	33.3	40.0	100.0	66.7	80.0	50.0	50.0	0.0	0	1	52.4	-52.4	27.4
Rehnquist	20.0	14.3	50.0	20.0	0.0	66.7	60.0	0.0	50.0	0.0	0	1	34.4	-34.4	45.2
Scalia	25.0	14.3	33.3	20.0	0.0	66.7	40.0	25.0	0.0	0.0	0	1	65.2	-65.2	14.4
Stevens	0.0	83.3	66.7	40.0	100.0	33.3	40.0	40.0	50.0	0.0	0	1	69.5	-69.5	40.5
Breyer*	0.0	88.3	50.0	40.0	100.0	33.3	40.0	20.0	100.0	0.0	0	1	32.0	-32.0	100.0
Ginsburg*	0.0	42.9	50.0	0.0	100.0	33.3	40.0	20.0	100.0	0.0	0	1	50.7	-50.7	99.3
Thomas*	0.0	100.0	60.0	20.0	0.0	66.7	50.0	25.0	0.0	0.0	0	1	15.5	-15.5	0.0
Souter*	0.0	50.0	50.0	40.0	100.0	33.3	40.0	20.0	100.0	0.0	0	1	2.6	-2.6	100.0
Majority	0.0	42.9	50.0	20.0	100.0	66.7	80.0	20.0	50.0	0.0	0	1	62.5	-62.5	37.7
Split	0.0	50.0	50.0	33.3	100.0	66.7	100.0	33.3	50.0	0.0	0	0			
Unanimous	0.0	33.3	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	1			

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Chart 6
Equal Protection Claims
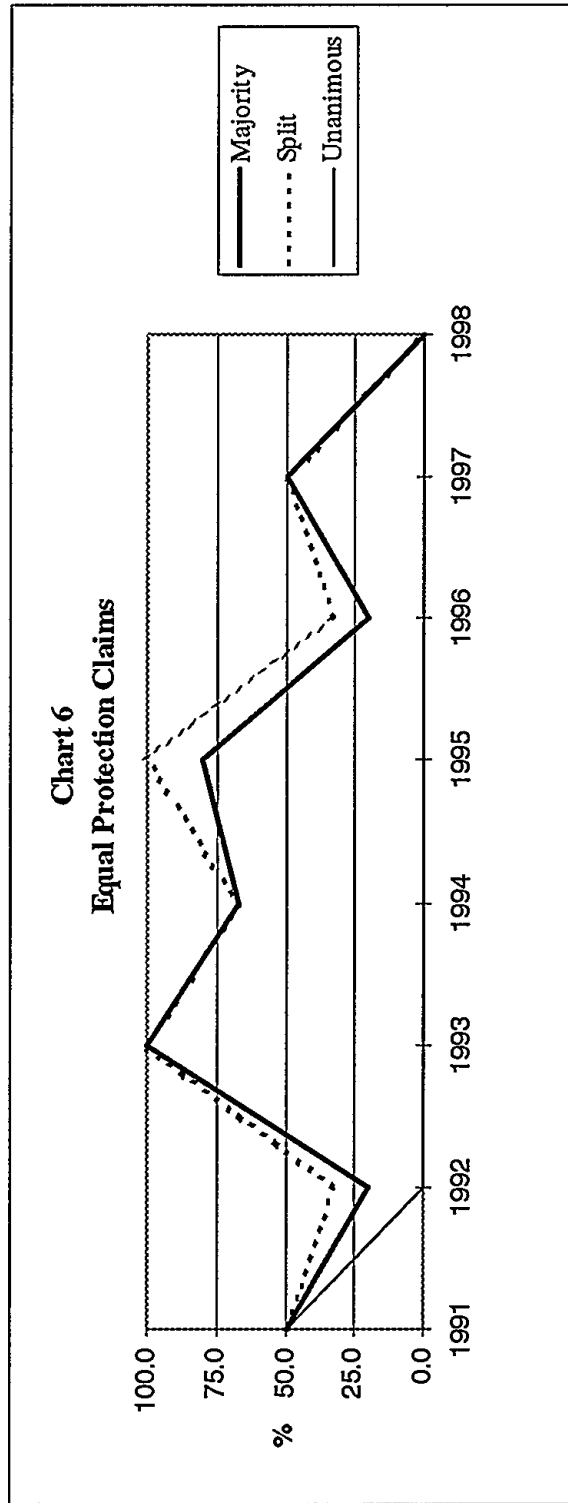
Mean Table 6

Equal Protection Claims

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	50.8	+/- 18.8	24.20	0.00	yes
O'Connor	49.6	+/- 18.6	25.00	0.00	yes
Rehnquist	30.4	+/- 18.2	24.45	0.00	yes
Scalia	25.7	+/- 15.4	20.71	0.00	yes
Stevens	48.5	+/- 20.0	26.89	0.00	yes
Breyer*	48.3	+/- 45.6	35.43	0.00	no
Ginsburg*	58.7	+/- 44.3	38.41	0.00	yes
Thomas*	31.7	+/- 26.8	27.54	0.00	yes
Souter*	54.2	+/- 27.2	29.85	0.00	yes

() = no data available or could not calculate with available data
*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Regression Table 6

Equal Protection Claims

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor	0.90/0.80							
Rehnquist								
Scalia			0.73/0.49					
Stevens								
Breyer*					0.76/0.44			
Ginsburg*					0.83/0.61	1.00/1.00		
Thomas*			0.71/0.43	0.94/0.87				
Souter*					0.74/0.48	1.00/1.00	1.00/1.00	

( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

     Justice Thomas replaced Justice Marshall in 1991

     Justice Ginsburg replaced Justice White in 1993

     Justice Breyer replaced Justice Blackmun in 1994

Data Table 7

Statutory Civil Rights Claims

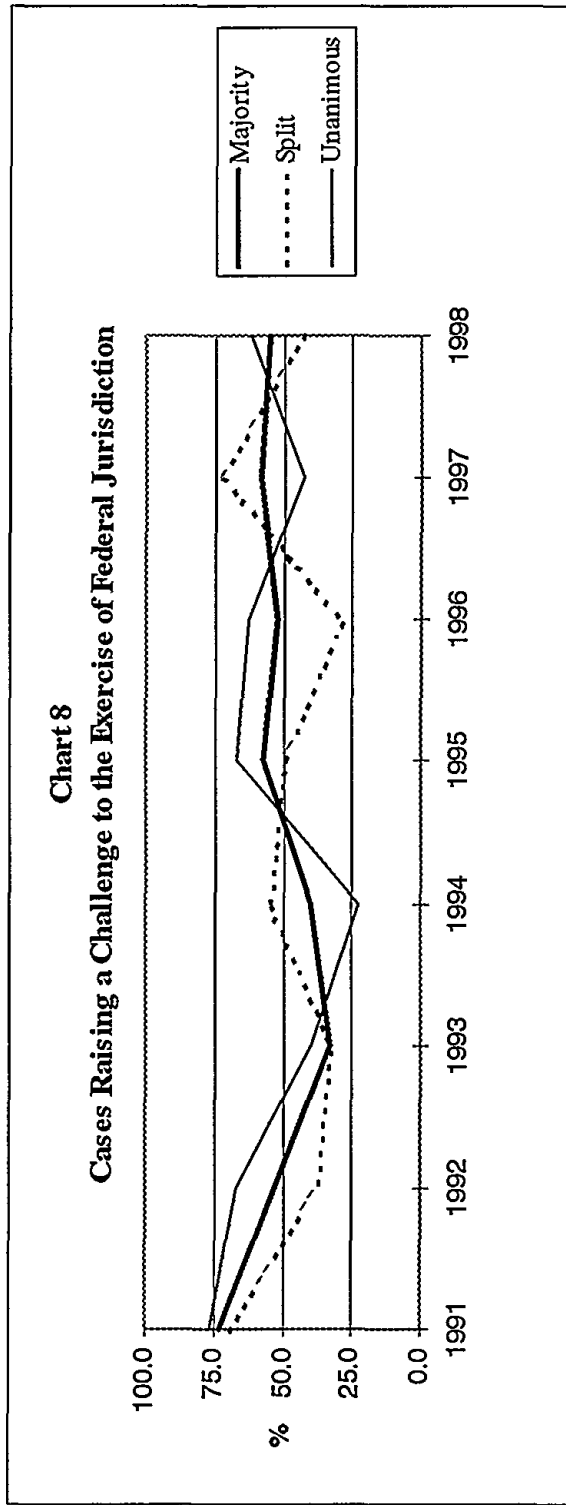| Justice | % Votes for Rights Claim | | | | | | | | | X2 | 1998 Term Votes | | Predictions | | |
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Claim	Against Claim	Prediction 1998	Error	Prediction 1999
Stevens	77.8	80.0	88.9	70.0	55.6	75.0	83.3	85.7	84.6	88.2	15	2	82.3	5.9	87.4
Breyer*	88.9	80.0	88.9	63.6	77.8	75.0	83.3	85.7	84.6	82.4	14	3	0	0	81.0
Ginsburg*	88.9	53.3	66.7	50.0	44.4	75.0	66.7	78.6	76.9	70.6	12	5	93.5	-22.9	78.7
Souter*	100.0	57.1	44.4	45.5	44.4	75.0	66.7	92.9	76.9	70.6	12	5	97.2	-26.6	79.7
OConnor	55.6	53.3	55.6	54.6	33.3	50.0	33.3	64.3	41.7	58.8	10	7	63.4	-4.6	41.6
Kennedy	62.5	33.3	55.6	36.4	33.3	25.0	16.7	50.0	61.5	47.1	8	9	68.2	-21.1	54.0
Scalia	55.6	46.7	44.4	45.5	33.3	25.0	16.7	50.0	23.1	41.2	7	10	42.5	-1.3	21.7
Rehnquist	44.4	33.3	44.4	36.4	33.3	50.0	16.7	50.0	30.8	35.3	6	11	29.2	6.1	34.6
Thomas*	100.0	86.7	28.6	45.5	33.3	25.0	16.7	50.0	23.1	23.5	4	13	34.7	-11.2	18.1
Majority	88.9	53.3	55.6	50.0	33.3	50.0	33.3	57.1	61.5	64.7	11	6	43.9	20.8	61.5
Split	83.3	33.3	40.0	50.0	0.0	50.0	25.0	16.7	62.5	63.6	7	4			
Unanimous	100.0	83.3	75.0	50.0	60.0	50.0	50.0	87.5	60.0	66.7	4	2			

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Chart 7

Statutory Civil Rights Claims
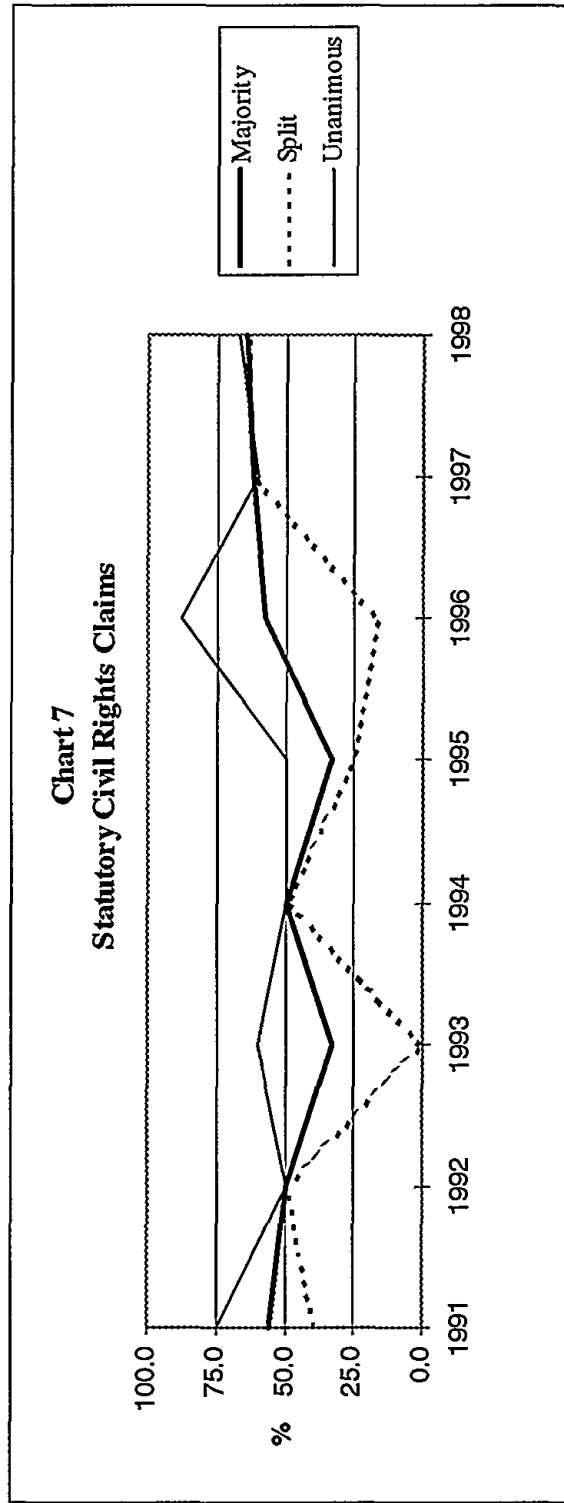
Mean Table 7

Statutory Civil Rights Claims

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X₂)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	44.2	+/- 12.8	16.52	47.06	no
O'Connor	47.3	+/- 8.0	10.72	58.82	yes
Rehnquist	37.5	+/- 6.8	9.19	35.29	no
Scalia	39.7	+/- 9.6	12.90	41.18	no
Stevens	78.4	+/- 7.5	9.68	88.24	yes
Breyer*	82.2	+/- 6.3	4.87	82.35	no
Ginsburg*	68.3	+/- 16.3	14.11	70.59	no
Thomas*	31.7	+/- 11.8	12.12	23.53	no
Souter*	62.9	+/- 16.4	18.02	70.59	no

( ) = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990

Justice Thomas replaced Justice Marshall in 1991

Justice Ginsburg replaced Justice White in 1993

Justice Breyer replaced Justice Blackmun in 1994

Regression Table 7

Statutory Civil Rights Claims

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor								
Rehnquist								
Scalia								
Stevens								
Breyer*					0.85/0.63			
Ginsburg*				0.79/0.56	0.86/0.68			
Thomas*								
Souter*							0.94/0.85	

() = no data available or could not calculate with available data

* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Data Table 8

Cases Raising a Challenge to the Exercise of Federal Jurisdiction

Justice	% Votes for Rights Claim										X2	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	1998 Term	For Claim	Against Claim	Prediction 1998	Error	Prediction 1999
Stevens	68.0	91.4	75.0	69.7	44.4	42.1	75.0	69.6	51.7	65.0	65.0	13	7	60	5.0	57.4
Breyer*	79.2	80.0	71.4	66.7	50.0	33.3	63.2	65.2	51.7	65.0	65.0	13	7	53.9	11.1	59.4
Ginsburg*	68.0	63.9	69.0	60.6	33.3	36.8	68.4	56.5	55.2	60.0	60.0	12	8	59.4	0.6	64.1
Souter*	87.5	57.6	75.0	56.3	33.3	30.0	68.4	56.5	60.7	60.0	60.0	12	8	62.8	-2.8	64.2
Kennedy	64.0	58.3	73.3	51.5	33.3	40.0	57.1	56.5	58.6	55.0	55.0	11	9	60.0	-5.0	54.8
O'Connor	68.0	54.3	63.3	53.1	22.2	40.0	47.6	54.6	43.3	55.0	55.0	11	9	0	0	43.9
Rehnquist	60.0	54.3	62.1	54.6	22.2	30.0	42.9	56.5	60.0	45.0	45.0	9	11	44	1.0	43.6
Thomas*	87.5	85.7	66.7	54.6	33.3	30.0	42.9	47.8	46.7	45.0	45.0	9	11	42.9	2.1	43.6
Scalia	60.0	48.5	55.2	51.5	22.2	35.0	42.9	47.8	43.3	40.0	40.0	8	12	40.1	-0.1	41.9
Majority	64.0	63.9	73.3	52.9	33.3	40.0	57.1	52.2	58.6	55.0	55.0	11	9	62.6	-7.6	52.8
Split	33.0	38.9	69.2	37.5	33.3	54.6	50.0	28.6	73.3	42.9	42.9	3	4			
Unanimous	81.3	88.9	76.5	66.7	40.0	22.3	66.7	62.5	42.9	61.5	61.5	8	5			

( ) = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

    Justice Thomas replaced Justice Marshall in 1991

    Justice Ginsburg replaced Justice White in 1993

    Justice Breyer replaced Justice Blackmun in 1994

Chart 8

Cases Raising a Challenge to the Exercise of Federal Jurisdiction

Mean Table 8

Cases Raising a Challenge to the Exercise of Federal Jurisdiciton

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X_2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	54.6	+/- 8.4	10.80	55.00	no
O'Connor	50.4	+/- 9.3	12.53	55.00	no
Rehnquist	50.8	+/- 9.9	13.38	45.00	no
Scalia	46.2	+/- 8.3	11.15	40.00	no
Stevens	65.7	+/- 10.6	14.25	65.00	no
Breyer*	53.4	+/- 18.8	14.62	65.00	no
Ginsburg*	50.1	+/- 16.9	14.65	60.00	no
Thomas*	46.0	+/- 12.1	12.46	45.00	no
Souter*	54.7	+/- 14.3	15.66	60.00	no

() = no data available or could not calculate with available data
*   Justice Souter replaced Justice Brennan in 1990
     Justice Thomas replaced Justice Marshall in 1991
     Justice Ginsburg replaced Justice White in 1993
     Justice Breyer replaced Justice Blackmun in 1994

Regression Table 8

Cases Raising a Challenge to the Exercise of Federal Jurisdiction

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor	0.84/0.67							
Rehnquist	0.88/0.75	0.84/0.68						
Scalia	0.80/0.60	0.94/0.87	0.90/0.79					
Stevens								
Breyer*	0.84/0.61	0.88/0.70		0.75/0.42	0.93/0.81			
Ginsburg*	0.92/0.82	0.79/0.53	0.71/0.38	0.80/0.56	0.91/0.79	0.89/0.73		
Thomas*	0.88/0.73	0.81/0.59	0.86/0.69	0.87/0.72	0.77/0.53	0.86/0.65	0.82/0.60	
Souter*	0.93/0.86	0.78/0.55	0.81/0.60	0.78/0.56	0.72/0.44	0.87/0.67	0.98/0.94	0.83/0.64

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

    Justice Thomas replaced Justice Marshall in 1991

    Justice Ginsburg replaced Justice White in 1993

    Justice Breyer replaced Justice Blackmun in 1994

Data Table 9
Federalism Cases

Justice	% Votes for Rights State Claim									X2	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For State	Against State	Prediction 1998	Error	Prediction 1999
Thomas*	37.5	14.3	35.0	66.7	42.9	72.2	56.0	73.2	36.8	64.0	16	9	64.8	-0.8	0
Rehnquist	56.3	71.4	43.5	73.3	71.4	72.2	51.9	75.6	36.8	60.0	15	10	72.8	-12.8	53.5
Scalia	56.3	71.4	26.1	60.0	57.1	81.3	55.6	73.2	31.6	52.0	13	12	46.2	5.8	25.5
O'Connor	56.3	71.4	39.1	73.3	57.1	55.6	44.4	70.7	29.4	45.8	11	13	88.2	-42.4	45.3
Kennedy	56.3	71.4	26.1	60.0	42.9	55.6	51.9	68.3	42.1	40.0	10	15	42.3	-2.3	51.0
Breyer*	43.8	14.3	43.5	53.3	71.4	38.9	34.6	50.0	15.8	32.0	8	17	68.7	-36.7	8.5
Souter*	37.5	83.3	36.4	60.0	57.1	44.4	34.6	43.9	15.8	32.0	8	17	66.6	-34.6	8.0
Ginsburg*	43.8	57.1	30.4	66.7	57.1	50.0	38.5	51.3	36.8	28.0	7	18	0	0	23.6
Stevens	43.8	28.6	31.8	60.0	57.1	55.6	29.6	45.0	35.0	8.0	2	23	34.6	-26.6	26.5
Majority	43.8	71.4	26.1	66.7	57.1	55.6	51.9	68.3	31.6	36.0	9	16	65.1	-29.1	49.5
Split	25.0	80.0	28.6	57.1	50.0	36.4	62.5	63.2	44.4	46.7	7	8			
Unanimous	50.0	50.0	22.2	75.0	60.0	85.7	36.4	72.7	20.0	20.0	2	8			

() = no data available or could not calculate with available data
* Justice Souter replaced Justice Brennan in 1990
   Justice Thomas replaced Justice Marshall in 1991
   Justice Ginsburg replaced Justice White in 1993
   Justice Breyer replaced Justice Blackmun in 1994

Chart 9
Federalism Cases
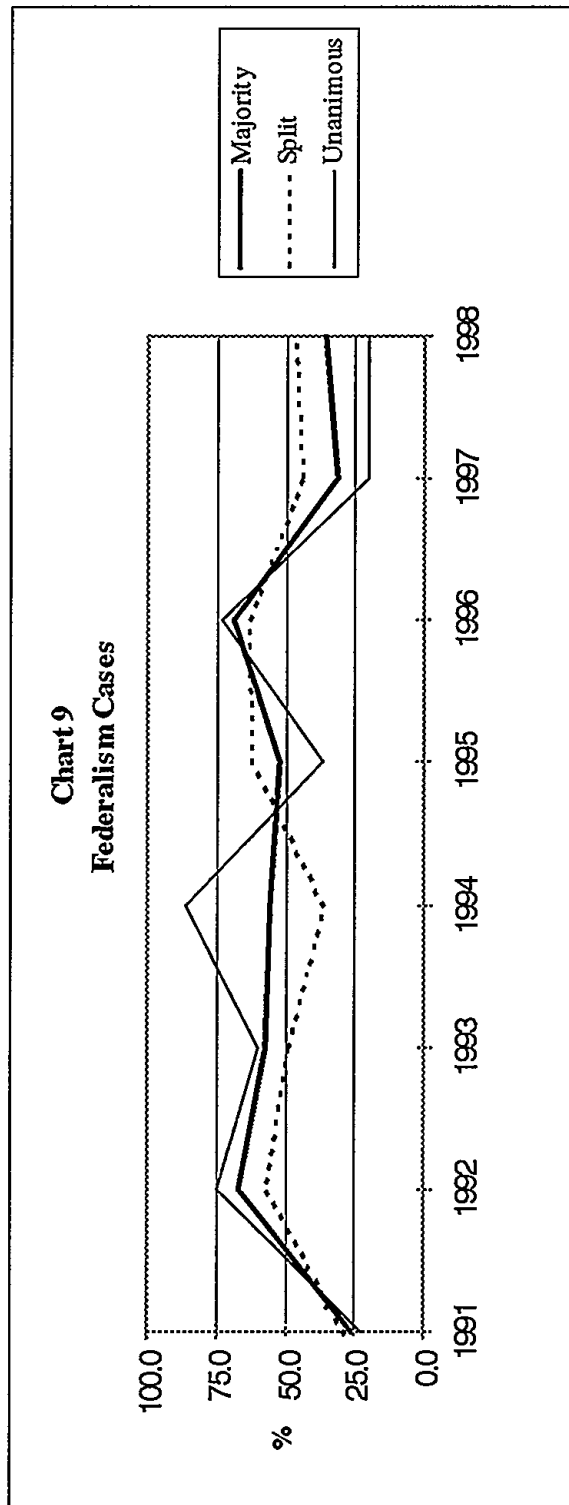
Mean Table 9

Federalism Cases

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X_2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	52.8	+/- 11.9	15.37	40.00	yes
O'Connor	54.9	+/- 12.8	16.42	45.83	no
Rehnquist	61.8	+/- 11.8	15.22	60.00	no
Scalia	56.3	+/- 15.0	19.29	52.00	no
Stevens	44.5	+/- 9.2	11.88	8.00	yes
Breyer*	34.8	+/- 18.4	14.25	32.00	no
Ginsburg*	46.8	+/- 10.1	8.74	28.00	yes
Thomas*	54.7	+/- 16.1	16.53	64.00	no
Souter*	46.9	+/- 18.4	20.17	32.00	no

() = no data available or could not calculate with available data
* Justice Souter replaced Justice Brennan in 1990
  Justice Thomas replaced Justice Marshall in 1991
  Justice Ginsburg replaced Justice White in 1993
  Justice Breyer replaced Justice Blackmun in 1994

Regression Table 9

Federalism Cases

Correlation (ρ) / R²

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor	0.86/0.72							
Rehnquist	0.77/0.55	0.93/0.85						
Scalia	0.86/0.72	0.83/0.66	0.90/0.79					
Stevens								
Breyer*	0.85/0.64	0.98/0.94	0.93/0.82	0.88/0.70	0.95/0.87			
Ginsburg*	0.81/0.60	0.72/0.43	0.76/0.51	0.88/0.73		0.92/0.80		
Thomas*								
Souter*		0.83/0.65	0.73/0.47			0.94/0.85	0.79/0.53	

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990

    Justice Thomas replaced Justice Marshall in 1991

    Justice Ginsburg replaced Justice White in 1993

    Justice Breyer replaced Justice Blackmun in 1994

Data Table 10

Swing-Vote Analysis: Who Votes Most Often with the Majority in Close Cases?

Justice	% Votes with the Majority									X₂	1998 Term Votes		Predictions		
	1989 Term	1990 Term	1991 Term	1992 Term	1993 Term	1994 Term	1995 Term	1996 Term	1997 Term	1998 Term	For Maj.	Against Maj.	Prediction 1998	Error	Prediction 1999
O'Connor	69.0	69.6	58.8	40.9	57.1	68.8	80.0	75.0	53.3	75.00	21	7	83.9	-8.9	68.9
Kennedy	71.4	52.2	64.7	72.7	92.9	81.3	85.0	81.3	87.5	67.86	19	9	57.9	10.0	80.4
Stevens	42.9	47.8	58.8	40.9	35.7	50.0	25.0	50.0	43.8	60.71	17	11	0	0	47.0
Ginsburg*	78.6	60.9	64.7	54.6	35.7	50.0	30.0	31.3	56.3	53.57	15	13	0	0	55.4
Scalia	66.7	52.2	35.3	81.8	71.4	56.3	75.0	56.3	50.0	50.00	14	14	0	0	51.2
Breyer*	33.3	47.8	70.6	31.8	35.7	43.8	25.0	43.8	56.3	50.00	14	14	48.5	1.5	69.5
Thomas*	35.7	43.5	23.5	72.7	57.1	50.0	75.0	56.3	56.3	50.00	14	14	52.4	-2.4	62.8
Rehnquist	66.7	69.6	41.2	72.7	71.4	62.5	75.0	62.5	56.3	46.43	13	15	42.0	4.4	50.6
Souter*	35.7	59.1	82.4	31.8	42.9	37.5	30.0	43.8	43.8	46.43	13	15	41.4	5.0	44.6
Conservative	64.3	54.5	41.2	63.6	64.3	35.7	60.0	56.3	43.7	42.9	12	16	52.9	-10.0	37.4
Liberal	35.7	45.5	58.8	36.4	35.7	64.3	40.0	43.7	56.3	57.1	16	12	47.1	10.0	62.5

() = no data available or could not calculate with available data
* Justice Souter replaced Justice Brennan in 1990
Justice Thomas replaced Justice Marshall in 1991
Justice Ginsburg replaced Justice White in 1993
Justice Breyer replaced Justice Blackmun in 1994

Chart 10
Swing-Vote Analysis
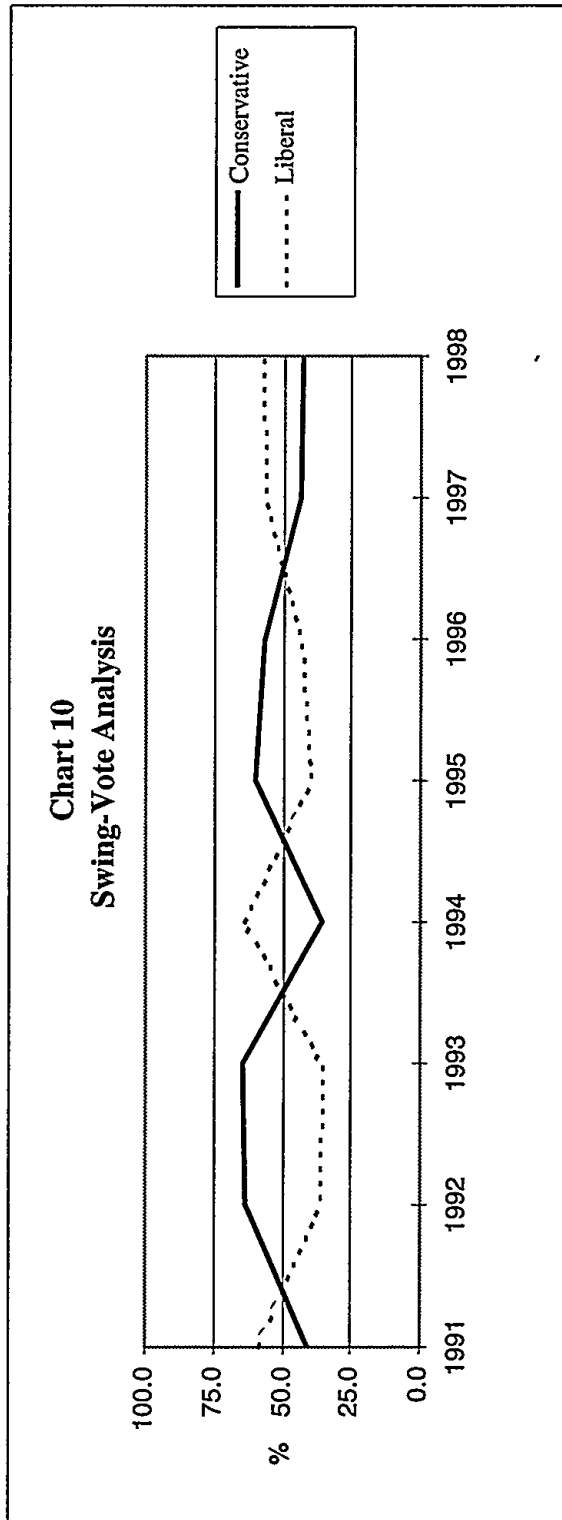
Mean Table 10

Swing-Vote Analysis: Who Votes Most Often with the Majority in Close Cases?

Justice	Mean Voting Percentage All Prior Terms (μ)	99% Confidence Interval for True Mean	Standard Deviation of μ (s)	Actual Voting Percentage This Term (X2)	Did This Term Show a Statistically Significant Change in Voting Behavior?
Kennedy	76.6	+/- 9.0	11.56	67.86	yes
O'Connor	64.9	+/- 8.9	11.51	75.00	yes
Rehnquist	65.9	+/- 7.9	10.15	46.43	yes
Scalia	62.3	+/- 10.5	13.58	50.00	yes
Stevens	43.9	+/- 9.0	11.63	60.71	yes
Breyer*	42.2	+/- 16.6	12.88	50.00	no
Ginsburg*	40.6	+/- 13.6	11.80	53.57	no
Thomas*	55.8	+/- 16.5	16.99	50.00	no
Souter*	46.4	+/- 15.6	17.08	46.43	no

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
    Justice Thomas replaced Justice Marshall in 1991
    Justice Ginsburg replaced Justice White in 1993
    Justice Breyer replaced Justice Blackmun in 1994

Regression Table 10

Swing-Vote Analysis: Who Votes Most Often with the Majority in Close Cases

Correlation (ρ) / R^2

Justice	Kennedy	O'Connor	Rehnquist	Scalia	Stevens	Breyer*	Ginsburg*	Thomas*
O'Connor								
Rehnquist								
Scalia			0.88/0.75					
Stevens			-0.70/0.44					
Breyer*		-0.75/0.42	-0.85/0.62	-0.98/0.94				
Ginsburg*			-0.79/0.53	-0.78/0.52	0.74/0.40	0.81/0.53		
Thomas*			0.87/0.71	0.90/0.78	-0.78/0.54	-0.81/0.55		
Souter*				-0.81/0.61		0.89/0.72		-0.93/0.85

() = no data available or could not calculate with available data

*   Justice Souter replaced Justice Brennan in 1990
   Justice Thomas replaced Justice Marshall in 1991
   Justice Ginsburg replaced Justice White in 1993
   Justice Breyer replaced Justice Blackmun in 1994

B. Analysis

Table 1: Civil—State Government versus Private Party

In the 1998 Term, the Court heard nearly twice as many civil cases involving state parties as the previous Term.[51] Despite this increase, Data Table 1 and Chart 1 show little change in the Court's treatment of state governments in civil cases this Term.[52] For example, the percentage of majority decisions in favor of a state party decreased only 1.9 percentage points – from 46.7% in the 1997 Term to 44.8% in the 1998 Term.[53] However, non-unanimous (or "split" decision) cases did experience a significant shift, increasing 13.8 percentage points from 33.3% to 47.1%.[54] This increase suggests a stronger conservative sentiment towards state governments in the 1998 Term.

Individually, Chief Justice Rehnquist and Justice Thomas once again tied as the most conservative Justices in this category, each voting for the state party 65.5% of the time.[55] This result was close to each of their predicted scores, only 2.5 and 4.0 percentage points off respectively.[56] The three-way tie of the 1997 Term was broken, as Justice O'Connor slid into a tie with Justice Scalia for the next most conservative Justice.[57] They each voted for the state party in 55.2% of

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51. This Term, the Court heard twenty-two civil cases involving a state party. In the 1997 Term, the Court heard approximately thirteen. *See 1997 Study, supra* note 1, at 584.

52. Cases decided in favor of state governments: American Mfrs. Mut. Ins. Co. v. Sullivan, 526 U.S. 40 (1999); Alden v. Maine, 527 U.S. 706 (1999); Florida Prepaid Postsecondary Educ. v. College Sav. Bank, 527 U.S. 627 (1999); College Sav. Bank v. Florida Prepaid Postsecondary Educ., 527 U.S. 666 (1999); Jefferson County v. Acker, 527 U.S. 423 (1999); Hunt v. Cromartie, 526 U.S. 541 (1999); Conn v. Gabbert, 526 U.S. 286 (1999); Central State Univ. v. American Ass'n of Univ. Professors, 526 U.S. 124 (1999); Martin v. Hadix, 527 U.S. 343 (1999); Arizona Dept. of Revenue v. Blaze Constr. Co., 526 U.S. 32 (1999); City of W. Covina v. Perkins, 525 U.S. 234 (1999); Cunningham v. Hamilton County, 527 U.S. 198 (1999); and Wilson v. Layne, 526 U.S. 603 (1999). Cases decided against state governments: Jefferson County v. Acker, 527 U.S. 423 (1999); Martin v. Hadix, 527 U.S. 343 (1999); South Cent. Bell v. Alabama, 526 U.S. 160 (1999); Lopez v. Monterey County, 525 U.S. 266 (1999); Buckley v. American Constitutional Law Found., 525 U.S. 182 (1999); Olmstead v. Zimring, 527 U.S. 581 (1999); City of Monterey v. Del Monte Dunes at Monterey, 526 U.S. 687 (1999); Davis v. Monroe County Bd. of Educ., 526 U.S. 629 (1999); Saenz v. Roe, 526 U.S. 489 (1999); Cedar Rapids Community Sch. v. Garret, 526 U.S. 66 (1999); Minnesota v. Mille Lacs Band of Chippewa, 526 U.S. 172 (1999); and Wilson v. Layne, 526 U.S. 603 (1999).

53. *See supra* Data Table 1.

54. *See id.*

55. *See id.*

56. *See id.*

57. *See id.*

the time.[58] The conservative to liberal ordering of the Justices in this category remained basically the same as last Term.[59] However, both Justice Stevens and Justice Ginsburg indicated a statistically significant change in voting behavior as both showed declining support of state governments in the 1998 Term.[60] Justice Stevens' score fell from 37.5% to 17.2%, while Justice Ginsburg's support fell from 46.7% to 31.0%.[61]

Unlike statistical predictions for the last two voting Terms, predicted voting patterns for the 1998 Term were too conservative. Illustratively, of the predictions that were too liberal, none deviated by more than 4 percentage points from the actual result. Conversely, predictions that were too conservative were in error on average by 19.3 percentage points.[62] Despite this, Justice Kennedy exhibited quite predictable voting behavior as his score of 51.7% varied only 0.5 percentage points from his predicted score.

Once again, the strongest correlation in voting behavior was between Justices Stevens and Ginsburg at 99%.[63] Additionally, the adjusted r^2 statistic for their correlation increased from 96% to 98% between this Term and last.[64] Such a high correlation and adjusted r^2 statistic indicate that the voting behavior of one of these two Justices can be accurately predicted by the voting behavior of the other. However, correlation does not imply causation. Interestingly, a 95% correlation in voting behavior existed between Justice Breyer and Chief Justice Rehnquist,[65] two rather ideologically opposed Justices.

Table 2: Civil—Federal Government versus Private Party

Data Table 2 and Chart 2 show that the Court's support of the federal government in civil cases increased dramatically this Term, with increased percentages in favor of the federal government in "Majority," "Split," and "Unanimous" decision cases.[66] Specifically,

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58. *See id.*

59. *See 1997 Study, supra* note 1, at 584.

60. *See supra* Mean Table 1.

61. *See id.*

62. *See supra* Data Table 1.

63. *See supra* Regression Table 1.

64. *See* 1997 Study, supra note 1, at 547.

65. *See id.*

66. Cases decided in favor of the federal government: AT&T v. Iowa Util. Bd., 525 U.S. 366 (1999); California Dental Ass'n v. F.T.C., 526 U.S. 756 (1999); United States v. Haggar Apparel Co., 526 U.S. 380 (1999); Reno v. American-Arab Anti-Discrimination Comm'n, 525 U.S. 471 (1999); Your Home Visiting Nurse Servs. v. Shalala, 525 U.S. 449

Majority decisions rose to 61.1% this Term, compared to the all-time low of 36.4% last Term.[67] Similarly, all nine Justices voted more often for the federal government this Term.

Among individual Justices' voting records, perhaps the most notable statistic is that, like last Term, historically liberal Justices Stevens and Ginsburg were again among the most supportive of the federal government. They tied for the second most conservative voting spot, with a score of 68.4%.[68] Only Justice O'Connor, who recorded a personal high score of 73.3%, was more consistent in her support of the federal government in civil cases.[69] On the contrary, normally conservative Chief Justice Rehnquist was one of the least supportive of the federal government, voting in its favor only 50% of the time.[70] Data Table 2 also shows a relatively narrow spread between the most conservative and liberal voting Justices – separated by only 23.3 percentage points.[71] Such close scores coupled with the unusual ordering of Justices suggests that civil cases involving federal parties is not a reliable indicator of ideologically motivated voting behavior. This is confirmed by the conclusion reached in the *Category Analysis* section below.[72]

Statistically predicted voting patterns were, with a few exceptions, too liberal. For example, Justice Souter was predicted to vote in favor of the government in only 42.2% of civil cases. Instead, he recorded a rather conservative score of 66.7%.[73] Although Justice Souter's increased support of the federal government did not represent a statistically significant change in his voting behavior, the change in voting behavior of four of the nine Justice's was statistically

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(1999); INS v. Aguirre-Aguirre, 526 U.S. 415 (1999); West v. Gibson, 527 U.S. 212 (1999); Dickinson v. Zurko, 527 U.S. 150 (1999); Department of Army v. Blue Fox, Inc., 525 U.S. 255 (1999). Cases decided against the federal government: AT&T v. Iowa Util. Bd., 525 U.S. 366 (1999); California Dental Ass'n v. F.T.C., 526 U.S. 756 (1999); Minnesota v. Mille Lacs Band of Chippewa, 526 U.S. 172 (1999); National Fed'n of Fed. Employees, Local 1309 v. DOI, 526 U.S. 86 (1999); NASA v. Federal Labor Relation Auth., 527 U.S. 229 (1999); Greater New Orleans Broad. Ass'n v. United States, 527 U.S. 173 (1999); Hanlon v. Berger, 526 U.S. 808 (1999).

67.   *See supra* Data Table 2.

68.   *See id.*

69.   *See id.*

70.   *See id.*

71.   *See id.*

72.   *See infra* Part V. Category analysis attempts to identify those categories in this study that truly reflect ideologically motivated voting behavior. The Civil-Federal Party category is second to last–nearly the least indicative category in the study. *See id.*

73.   *See supra* Data Table 2.

significant.[74] None of the Justices voted in a manner that produced notable correlations.

Table 3: Criminal—State Government versus a Private Party

Data Table 3 and Chart 3 demonstrate the Court's decreased favor for the states in criminal cases during the 1998 Term.[75] While the majority of the Court voted for the state 71.4% of the time in the 1997 Term, the majority voted for the state only 63.6% of the time during the 1998 Term.[76] Although this decrease may indicate a slight liberal trend, it might also be explained by the notable conservative increase during the 1997 Term resulting in the second highest conservative score since 1989. The 1998 decrease may only indicate that the 1997 Term was unusually conservative and not necessarily an accurate indicator of the Court's liberal/conservative nature.[77]

However, a slight liberal trend is also evidenced by the decreased individual scores of each Justice. Specifically, Justices Kennedy and Souter had the most dramatic decreases, each voting for the government over 20% less than they did in 1997.[78] Justice Thomas remained at the top, voting for the government in 80% of the decisions, and Justice Stevens reclaimed the most liberal position, with a score of 9.1%.[79] Chief Justice Rehnquist continued to vote predictably with his score varying only 0.3 percentage points from last Term's prediction.

Although the Court – both overall and as individual Justices – voted less often in favor of state parties in criminal cases this Term, a slight conservative trend is evidenced by the increased score in non-unanimous (or "split") decisions for state parties of 77.8%.[80] On the other hand, the "Unanimous" cases reflected the liberal trend shown in the other categories, with the Court voting against the states in

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74. *See supra* Mean Table 2.

75. Cases decided in favor of the states: Calderon v. Coleman, 525 U.S. 141 (1999); Florida v. White, 526 U.S. 559 (1999); Maryland v. Dyson, 527 U.S. 465 (1999); O'Sullivan v. Boerckel, 526 U.S. 838 (1999); Stewart v. LaGrand, 526 U.S. 1001 (1999); Wyoming v. Houghten, 526 U.S. 295 (1999). Cases decided against the states: City of Chicago v. Morales, 527 U.S. 41 (1999); Knowles v. Iowa, 525 U.S. 113 (1998); Lilly v. Virginia, 527 U.S. 116 (1999). In *Strickler v. Green*, 527 U.S. 263 (1999), the Court addressed two issues and decided for the state on one issue and against the state on the other.

76. *See supra* Data Table 3.

77. *See id.*

78. *See id.*

79. *See id.*

80. *See id.*

100% of the unanimous decisions—the most liberal score since the 1990 Term.[81]

Table 4: Criminal—Federal Government versus Private Party

The Court's support for the federal government in criminal cases notably decreased in the 1998 Term.[82]   Although scores remain moderately conservative, Data Table 4 and Chart 4 indicate that, for the first time since prior to 1989, the Court's scores decreased in all three types of decisions – "Majority", "Split," and "Unanimous." The Majority of the Court held for the federal government 61.5% of the time, and of the cases decided unanimously, 75.0% were decided in favor of the government.[83] The Court has only recorded a lower score in the "Majority" category twice in the last ten Terms; and, although 75.0% in the "Unanimous" category remains a high score, it is a marked decrease from the 100% scores received in the last two consecutive Terms.[84]   In non-unanimous (or "split" decision) cases, the Court decided for the federal government in only five of the nine cases.[85] The slightly liberal trend detected in the declining "Majority" and "Split" scores of last Term seems to have continued and possibly gained momentum during the 1998 Term.

The Court's liberal trend is further illuminated in the Justices' individual voting scores.   All but Justice O'Connor and Justice Rehnquist voted less often for the federal government than last Term, and all Justices received lower scores than they have received in at least the previous two Terms.[86]   Chief Justice Rehnquist again voted as predicted, varying only 1.3% from our last predictions.[87]   Justice Ginsburg received her lowest score yet.   However, Justice Stevens maintained his position as the most liberal Justice, voting for the

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81. *See id.*

82. Cases decided in favor of the federal government: Clinton v. Goldsmith, 526 U.S. 529 (1999); Federal Republic of Germany v. United States, 526 U.S. 111 (1999); Holloway v. United States, 526 U.S. 1 (1999); Jones v. United States, 527 U.S. 373 (1999); Neder v. United States, 527 U.S. 1 (1999); Peguero v. United States, 526 U.S. 23 (1999); United States v. Rodriguez-Moreno, 526 U.S. 275 (1999). Cases decided against the government: Jones v. United States, 526 U.S. 227 (1999); Mitchell v. United States, 526 U.S. 314 (1999); Richardson v. United States, 526 U.S. 813 (1999); United States v. Sun Diamond Growers, 526 U.S. 398 (1999).

83. *See supra* Data Table 4.

84. *See id.*

85. *See id.*

86. *See id.*

87. *See id.*

federal government in only 38.5% of the decisions.[88]

The conservative to liberal ordering of the Justices is particularly interesting in Data Table 4. While Justices O'Connor and Kennedy, the two most frequent swing voters, occupy the top two positions, both Justices Scalia and Thomas, typically among the most conservative, occupy unusually low positions. This peculiar ordering may be explained by a number of decisions where Justice Scalia's and Justice Thomas's narrow reading of the law led them to liberal outcomes.[89]

Table 5: First Amendment

The Court decided only two cases which touched on First Amendment issues this Term.[90] This limited data makes it difficult to detect ideological trends or positions in this category. However, one point is clear: the conclusion reached in the 1996 and 1997 Studies,[91] that the "First Amendment fared poorly,"[92] did not hold true in the 1998 Term. Although the Court adjudicated only two cases involving First Amendment claims, the Court actually reached decisions on four different First Amendment issues.[93] Each issue was decided in favor of the claim, with Chief Justice Rehnquist, and Justices O'Connor and Breyer dissenting on two of the four issues addressed.[94] So, rather than "far[ing] poorly," the First Amendment fared very well during the 1998 Term.

There are a few results worth noting among the individual Justices' voting reports. Justices Thomas and Scalia – typically conservative voters in this category – voted for the claim and,

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88. *See id.*

89. *See* Holloway v. United States, 526 U.S. 1 (1999); Jones v. United States, 526 U.S. 227 (1999); and United States v. Rodriguez-Moreno, 526 U.S. 275 (1999).

90. The two cases decided were *Buckley v. America Constitutional Law Found.*, 525 U.S. 182 (1999) and *Greater New Orleans Broad. Ass'n v. United States*, 527 U.S. 173 (1999).

91. *See 1996 Study, supra* note 1, at 90; *1997 Study, supra* note 1, at 540.

92. *See 1997 Study, supra* note 1, at 588

93. In *Buckley v. American Constitutional Law Found.*, 525 U.S. 182 (1999), the Court addressed three First Amendment issues: 1) Did the company requirement that petition circulators be registered voters violate the First Amendment?; 2) Did the company requirement that petition circulators wear badges stating their name and indicating whether they were paid or volunteer violate the First Amendment?; 3) Did the company requirement that the names and addresses of all paid petition circulators be turned into the company violate the First Amendment?

94. *See Buckley*, 525 U.S. at 213 (O'Connor, J., joined by Breyer, J., concurring in part and dissenting in part); *see also id.* at 659 (Rehnquist, C.J., dissenting).

therefore, liberally on all four First Amendment issues, while Justice Breyer – typically a liberal voter in this category – joined Justice O'Connor's conservative dissent against the claim on two of the four issues.

Finally, the study's 1998 prediction for the Majority votes in favor of the First Amendment claim was 90.1 percentage points in error, the largest error percentage of all nine categories.[95] This large error is a result of the lack of First Amendment cases decided during both the 1997 and 1998 Term.

Table 6: Equal Protection

This Term, the Court decided only one case touching on an equal protection issue.[96] Like the First Amendment category, such limited data creates statistical problems and this Term's voting record might best be analyzed in conjunction with the 1997 Term's decisions.

The equal protection record for the 1997 Term indicated a slight liberal movement. However, this detection was based upon the only two equal protection cases addressed by the Court. In the 1998 Term, the Court's single Equal Protection decision was unanimously decided against the claim and, therefore, decided conservatively. Among the ten categories of cases, the Equal Protection category was joined only by the "Civil-Federal Party" category in moving to the conservative half of the spectrum.[97]

Combining this Term's decision with those made in the 1997 Term may provide a better indicator of ideological trends in this category. If the single issue decided during this Term had been decided during the 1997 Term, this single conservative decision would have offset the liberal trend detected in last Term's voting record. Therefore, combining the records for the 1997 and 1998 Terms indicates that, with respect to Equal Protection issues, the Court is maintaining its generally conservative disposition.

Data Table 6 and Chart 6 provide at least one notable statistic: the issue presented this Term was the first the Court has been able to unanimously agree upon since 1991.[98] The data also indicate that last

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95. *See supra* Data Table 5.

96. The only case decided was *Central State University v. American Ass'n of Univ. Professors*, 526 U.S. 124 (1999).

97. *Compare supra* Data Table 4 and Data Table 6 *with supra* Data Tables 1-3, 5, and 7-10.

98. *See supra* Data Table 6. Note, however, that Justice Stevens did not take a position on the equal protection issue in *Central State Univ. v. American Ass'n of Univ. Professors*, 526 U.S. 124 (1999). Thus, the Court was "unanimous" among the eight

Term's prediction for this Term's Majority votes in favor of the Equal Protection claim was 62.5 percentage points in error.[99] As with the First Amendment prediction, this large error is a result of the lack of Equal Protection cases decided during both the 1997 and 1998 Terms.

Table 7: Statutory Civil Rights

Following the liberal trend in this category, the Court increased its support of statutory civil rights claims for the fourth consecutive Term.[100] Data Table 7 and Chart 7 indicate that the majority voted in favor of statutory civil rights claims 64.7% of the time.[101] This liberal trend is further manifested in the percentage of non-unanimous (or "split" decision) and unanimous cases decided in favor of such claims, which increased to 63.6% and 66.7%, respectively.[102]

The liberal to conservative ordering of the Justices in this category was representative of typical ideologies. Justice Stevens recorded the most liberal score of 88.2%, his second highest in this category since the inception of this study.[103] Justice Breyer followed by supporting claims for statutory civil rights 82.4% of the time.[104] On the other end of the liberal/conservative spectrum, Justice Thomas only supported statutory civil rights claims 23.5% of the time.[105] The significant spread between the high and low scores illuminates the ideological divide among the Justices in this category.[106]

The predicted voting behavior for this Term was generally too

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Justices reaching the issue.

99. *See id.*

100. Cases decided in favor of statutory civil rights claims: Kolstad v. American Dental Ass'n, 527 U.S. 526 (1999); Lopez v. Monterrey County, 525 U.S. 266 (2000); Roberts v. Galen of Va., Inc., 525 U.S. 249 (1999); Haddle v. Garrison, 525 U.S. 121 (1998); Wright v. Universal Maritime Corp., 525 U.S. 70 (1998); Olmstead v. Zimring, 527 U.S. 581 (1999); NASA v. Federal Labor Relations Authority, 527 U.S. 229 (1999); West v. Gibson, 527 U.S. 212 (1999); Cleveland v. Policy Management Sys. Corp., 526 U.S. 795 (1999); Davis v. Monroe County Bd. of Educ., 526 U.S. 629 (1999); and Cedar Rapids Community Sch. v. Garret, 526 U.S. 66 (1999). Cases decided against the statutory civil rights claim: American Mfrs. Mut. Ins. Co. v. Sullivan, 526 U.S. 40 (1999); Kolstad v. American Dental Ass'n, 527 U.S. 526 (1999); NCAA v. Smith, 525 U.S. 459 (1999); Albertsons, Inc. v. Kirkingburg, 527 U.S. 555 (1999); Murphy v. United Parcel Serv., 527 U.S. 516 (1999); and Sutton v. United Airlines, 527 U.S. 471 (1999).

101. See *supra* Data Table 7.

102. *See id.*

103. *See id.*

104. *See id.*

105. *See id.*

106. *See infra* Part V (indicating that the Statutory Civil Right's category is the second most indicative category for ideologically motivated decisions).

liberal. For example, the predictions for Justices Ginsburg, Souter, and Kennedy were each too liberal by more than twenty percentage points.[107] However, the predicted majority outcome was far too conservative – only 43.9% when the actual score was 64.7%.[108] A notable correlation between Justice Souter and Ginsburg can be detected as the two recorded a 94% correlation with an adjusted r^2 statistic of 85%.[109] Although this does not indicate that Justices Souter and Ginsburg vote alike on issues,[110] it does reflect that their conservative/liberal movements in this category usually proceed in the same direction.

Table 8: Jurisdiction

Data Table 8 lists the Justices from the most liberal to the most conservative voting in the Jurisdiction category.[111] This Term, the Majority decided 55.0% of all claims for the exercise of jurisdiction in favor of the claim.[112] This closely matches the Majority's average for the past decade, and only drops 3.6 percentage points from the 1997 Term's average.[113] In fact, since 1995, the Majority's average has deviated less than seven percentage points.[114] Despite this minimal

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107. *See supra* Data Table 7.

108. *See id.*

109. *See supra* Regression Table 7.

110. *See infra* Appendix B.

111. *See supra* Data Table 8. Votes in favor of the exercise of federal jurisdiction are considered liberal, while votes denying jurisdiction are considered conservative. Chart 8 is similarly organized; the higher the line, the more liberal the voting behavior. *See supra* Chart 8.

112. The following are cases decided in favor of the exercise of jurisdiction: Department of Commerce v. United States House of Representatives, 525 U.S. 316 (1999); El Paso Natural Gas Co. v. Neztsosie, 526 U.S. 473 (1999); Grupo Mexicana de Desarollo v. Alliance Bond Fund, 527 U.S. 308 (1999); Jefferson County, v. Acker, 527 U.S. 423 (1999); Lilly v. Virginia, 527 U.S. 116 (1999); Murphy Bros., Inc. v. Michetti Pipe Stringing, 526 U.S. 344 (1999); Ruhgas v. Marathon Oil Co., 526 U.S. 574 (1999); South Cent. Bell v. Alabama, 526 U.S. 160 (1999); United States v. Rodriquez-Moreno, 526 U.S. 275 (1999); and Wright v. Universal Maritime Serv. Corp., 525 U.S. 70 (1998). Cases decided against the exercise of jurisdiction are: Clinton v. Goldsmith, 526 U.S. 529 (1999); Cunningham v. Hamilton County, 527 U.S. 198 (1999); El Al Israel Airlines, Ltd. v. Tsui Yuan Tseng, 525 U.S. 155 (1999); El Paso Natural Gas Co. v. Neztsosie, 526 U.S. 473 (1999); Federal Republic of Germany v. United States, 526 U.S. 111 (1999); Grupo Mexicana de Desarollo v. Alliance Bond Fund, 527 U.S. 308 (1999); Marquez v. Screen Actors Guild, Inc., 525 U.S. 33 (1998); Reno v. American-Arab Anti-Discrimination Comm., 525 U.S. 471 (1999); and Your Home Visiting Nurse Servs. v. Shalala, 525 U.S. 449 (1999).

113. *See supra* Data Table 8.

114. *See id.*

deviation, Data Table 8 shows the prediction for this Term was 62.6% in favor of jurisdiction claims, which is still 7.6 percentage points higher than the actual result.[115] The prediction for next Term accounts for this and places the Majority's average at a low, but still liberal, 52.8%.[116]

Non-unanimous (or "Split") decision cases decided in favor of the exercise of jurisdiction dropped 30.4 percentage points, indicating a significant conservative movement in ideologically charged cases.[117] On the other hand, a slight liberal movement can be detected in unanimous cases decided in favor of jurisdiction, which increased 18.6 percentage points from the 1997 Term.[118]

Like the Majority's averages, voting averages for individual Justices also closely matched past performances. Mean Table 8 indicates that not a single Justice showed statistically significant changes in voting behavior.[119] In fact, every Justice save Justice Breyer was within five percentage points of his/her predicted average, and Justice Scalia voted within one-tenth of his predicted average.[120] The Jurisdiction category is the only category this Term where at least one Justice's voting behavior did not deviate statistically significantly from the past. Furthermore, in this category, typical ideological positions tend to be revealed. For example, Justices Stevens, Breyer, Ginsburg, and Souter voted 60.0% or more in favor of jurisdiction claims, while Justices Rehnquist, Thomas, and Scalia voted 45.0% or less for jurisdiction claims.[121] Justices O'Connor and Kennedy voted right in the middle at 55.0%.[122]

Table 9: Federalism

Data Table 9 lists the Justices from most conservative to most liberal.[123] Counter to this Term's touted resurgence for State's rights, Data Table 9 shows that the Majority's average for decisions favoring

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115. *See id.*

116. *See id.*

117. *See id.*

118. *See id.*

119. *See supra* Mean Table 8.

120. *See supra* Data Table 8.

121. *See id.*

122. *See id.*

123. *See supra* Data table 9. Chart 9 is similarly organized; the higher the line, the more conservative the voting behavior. *See supra* Chart 9.

the States is still a predominantly liberal 36.0%.[124] This is only a 4.4% increase from the 1997 Term.[125] Non-unanimous (or "Split") decisions increased only 2.3% to 46.7% in favor of the States, and unanimous decisions remained exactly the same at 20.0%.[126] Furthermore, Data Table 9 shows that this Term's majority result was 29.1 percentage points lower – or more liberal – than the prediction.[127] This demonstrates that, overall, the Court's decisions reflect only an ever-so-slight conservative movement.

On the other hand, the individual Justices' voting behavior exhibited significant changes. For example, Mean Table 9 shows that the voting of Justices Kennedy, Stevens, and Ginsburg varied significantly from past Terms.[128] Justices Stevens and Ginsburg, voting 8.0% and 28.0% respectively, voted in favor of the State at their all-time lows.[129] Further, although Justice Kennedy's average was only 2.1% more liberal than his 1997 Term's average,[130] his 40.0% average in favor of the State was still low enough to tag his voting behavior as a statistically significant deviation from the combined mean of past Terms.[131] In contrast, Justice Thomas voted 27.2% higher in favor of the States compared with last Term with an average of 64.0%, and both Justices Rehnquist and Scalia increased their averages more than 20%.[132]

Despite Justice Thomas' substantial increase in favor of the

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124. Cases decided in favor of the State are: Alden v. Maine, 527 U.S. 706 (1999); Central State Univ. v. American Ass'n of Univ. Professors, 526 U.S. 124 (1999); City of W. Covina v. Perkins, 525 U.S. 234 (1999); College Sav. v. Florida Prepaid Postsecondary Educ., 527 U.S. 666 (1999); Florida Prepaid Postsecondary Educ. v. College Sav., 527 U.S. 627 (1999); Maryland v. Dyson, 527 U.S. 465 (1999); Stewart v. LeGrand, 526 U.S. 1001 (1999); UNUM Life Ins. v. Ward, 526 U.S. 358 (1999); and Wilson v. Layne, 526 U.S. 603 (1999). Cases decided in favor of the United States are: AT&T v. Iowa Utils. Bd., 525 U.S. 366 (1999); City of Chicago v. Morales, 527 U.S. 41 (1999); City of Monterey v. Del Monte Dunes at Monterey, 526 U.S. 687 (1999); El Paso Natural Gas Co. v. Neztsosie, 526 U.S. 473 (1999); Jefferson County v. Acker, 527 U.S. 423 (1999); Knowles v. Iowa, 525 U.S. 113 (1998); Lopez v. Monterey County, 525 U.S. 266 (1999); Minnesota v. Mille Lacs Band of Chippewa, 526 U.S. 172 (1999); Murphy Bros., Inc. v. Michetti Pipe Stringing, 526 U.S. 344 (1999); Saenz v. Roe, 526 U.S. 489 (1999); South Cent. Bell v. Alabama, 526 U.S. 160 (1999); and Wilson v. Layne, 526 U.S. 603 (1999).
  125. *See supra* Data Table 9.
  126. *See id.*
  127. *See id.*
  128. *See supra* Mean Table 9.
  129. *See supra* Data Table 9.
  130. *See id.*
  131. *See supra* Mean Table 9.
  132. *See supra* Data Table 9.

States, his actual voting average deviated less than 1 point from the prediction.[133] Justice Kennedy's average this Term was also close to the prediction, varying only 2.3 points.[134] Predictions for other Justices were not so accurate. Justice O'Connor voted 42.4 points more liberally than predicted, and both Justices Breyer and Souter voted about 35 points more in favor of the United States.[135] For Justices Breyer and Souter, this voting pattern drastically alters their predicted voting averages for next Term, which are 8.5% and 8.0% respectively in favor of the States.[136] In sum, although the Court Majority's averages stayed relatively stable in the Federalism category, this Term's voting behavior suggests that the individual Justices are becoming more polarized in their ideological stances.

Table 10: Swing Votes

Data Table 10 and Chart 10 indicate the voting scores for the seventeen cases this Term that were decided by a margin of one vote.[137] From both conservative and liberal outcomes last Term, this Term's decisions have deviated less than one point.[138] Conservative decisions were reached 42.9% of the time, and liberal decisions were reached for the remaining 57.1%.[139] This is the second consecutive time that the liberal coalition has prevailed over the conservative, and the fourth time over the course of this study. Whether this is a strengthening trend remains to be seen. However, next year's

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133. *See id.*

134. *See id.*

135. *See id.*

136. *See id.*

137. Swing-vote cases reaching a conservative outcome are: Alden v. Maine, 527 U.S. 706 (1999); Calderon v. Coleman, 525 U.S. 141 (1998); City of Monterey v. Del Monte Dunes at Monterey, 526 U.S. 687 (1999); College Sav. Bank v. Florida Prepaid Postsecondary Educ, 527 U.S. 666 (1999); Davis v. Monroe County Bd. of Educ., 526 U.S. 629 (1999); Florida Prepaid Postsecondary Educ. v. College Sav., 527 U.S. 627 (1999); Grupo Mexicana de Desarollo v. Alliance Bond Fund, 527 U.S. 308 (1999); Jones v. United States, 527 U.S. 373 (1999); Kolstad v. American Dental Ass'n, 527 U.S. 526 (1999); Minnesota v. Mille Lacs Band of Chippewa, 526 U.S. 172 (1999); and West v. Gibson, 527 U.S. 212 (1999). Swing-vote cases reaching a liberal outcome are: California Dental Ass'n v. F.T.C., 526 U.S. 756 (1999); Jefferson County v. Acker, 527 U.S. 423 (1999); Jones v. United States, 526 U.S. 227 (1999); Minnesota v. Mille Lacs Band of Chippewa, 526 U.S. 172 (1999); Mitchell v. United States, 526 U.S. 314 (1999); NASA v. National Federal Labor Relations Auth., 527 U.S. 229 (1999); National Fed'n of Fed. Employees, Local 1309 v. DOI, 526 U.S. 86 (1999); and West v. Gibson, 527 U.S. 212 (1999).

138. *See supra* Data Table 10.

139. *See id.*

prediction widens the gap between the conservative and liberal decision, forecasting that 62.5% of the swing-vote cases will be decided liberally.[140]

Justices in Data Table 10 are organized from those agreeing most often with the majority in swing-vote cases to those agreeing least with the majority.[141] Justice O'Connor, for the first time since 1990, occupied the most influential swing-voter position, knocking Justice Kennedy from his four-year reign.[142] Justice O'Connor voted 75.0% of the time – a personal record[143] – with the majority.[144] Justice Kennedy is predicted to retake this position next year, voting 80.4% of the time with the majority.[145] Predictions this Term for Justices Breyer, Thomas, Rehnquist, and Souter were extremely accurate, all coming within five percentage points of the Justices' actual voting record.

Justice Stevens, who – along with Justice Souter – agreed the least with the Majority last Term, moved to the number three spot this Term, voting 60.71% of the time for the Majority – another personal record.[146] Justices Scalia, Thomas, and Breyer reflected neutral positions, voting 50.0% for the majority in both conservative and liberal outcomes.

V. Category Analysis

Beginning in the 1996 Term, we began to analyze the effectiveness of this Study's categories in measuring liberal and conservative tendencies and trends. As might be expected, some categories turn out to be better indicators than others of the Court's collective and individual predilections.

Some categories, although tending to divide the Court into liberal/conservative blocs, may change polarity depending on the specific issues presented. For example, during the 1996 Term, First Amendment scores placed Justices Scalia and Thomas at the top – a liberal position under this Study's definitions, and a position not commonly occupied by these particular Justices. Conversely, Justice Breyer held the bottom spot last Term. Other categories tend to be

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140. *See id.*
141. *See id.*
142. *See id.*
143. A personal record during the course of this study.
144. *See supra* Data Table 10.
145. *See id.*
146. A personal record during the course of this study.

implicated in very few cases. The small sample results in highly volatile score movements from Term to Term because a single case may account for many percentage points. This point is dramatically illustrated this Term in both the First Amendment and Equal Protection categories, with only three cases touching on these issues between both categories.[147] Because only one Equal Protection issue was decided and was decided unanimously (save for Justice Stevens who didn't reach the issue)[148] each Justice scored 0% in the category[149] – an unprecedented result.

In order to determine which categories best differentiate between more liberal and more conservative Justices, we have applied factor analysis.[150] By applying this method, we have determined that a primary factor may be extracted from the Study's categories that accounts for over 37% of the variance revealed by the data on Tables 1 through 9.[151] We interpret this factor as liberal/conservative bias because that is what this Study purports to measure. The categories currently load onto this primary factor as follows:

Category	Factor 1
Criminal/State Party	0.864
Statutory Civil Rights	0.782
Civil/State Party	0.744
Jurisdiction	0.727
Criminal/Federal Party	0.673
Federalism	0.589
First Amendment	0.302
Civil/Federal Party	0.098
Equal Protection	0.009
Variance	3.341
% Variance	0.371

According to this ranking, the "Criminal: State versus Private Party" category appears to be our best differentiator of liberal/conservative leanings, while Equal Protection is our poorest. A look at the data seems to confirm this result.

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147. *See supra* Data Tables 5 and 6.

148. *See* Central State Univ. v. American Ass'n of Univ. Professors, 526 U.S. 124 (1999).

149. *See supra* Data Table 6.

150. For more information regarding factor analysis, *see* Appendix B.

151. We employed a QMAX rotation to achieve this result.

Equal Protection claims are relatively rare and produce volatile results.[152] Civil-Federal Party case scores, moreover, tend to switch poles as executive administrations change. Liberal administrations will bring different types of cases before the Court than will conservative administrations and will garner the support of different Justices. For example, Chief Justice Rehnquist's average score was 74% under Republican administrations, but has fallen to 54% since President Clinton took office.[153] On the other hand, Justice Stevens averaged 48% under the Republicans and 61% under President Clinton.[154] First Amendment cases also tend toward pole swapping. For example, if the 1996 Term's free speech issues had concerned flag burning rather than abortion clinic demonstrations and government regulation, the scores might have been nearly reversed.[155]

Category analysis, in short, suggests that the most reliable indicator of actual ideology is the data collected on Table 3 (criminal/state party), with Tables 7 (statutory civil rights), 1 (state civil actions), 8 (jurisdiction), and 4 (federal criminal cases) providing the next most reliable data. Tables 9 (federalism), 5 (First Amendment), 2 (federal civil actions) and 6 (Equal Protection) provide the least reliable information.

VI. Frontier Analysis

Attempting to quantify the magnitude of a Justice's liberal or conservative tendencies and to identify trends in such tendencies over time is challenging for a variety of reasons. One challenge already discussed is that of choosing appropriate tests and assessing their validity. Another is dealing with inconsistency in the nature of cases appealed to the Court from one Term to the next and the Court's selection of which questions it will decide. With varying parameters such as these, is there any meaningful way to quantify, analyze and compare the Justices' inclinations? One potentially useful method is frontier analysis.[156]

Frontier analysis focuses on the Justices' relative scores rather

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152. *See supra* Chart 6.

153. *See supra* Data Table 2.

154. *See id; see also* discussion of Table 2, *supra.*

155. *See 1996 Study, supra* note 1, at 91. Note, however, that because of the First Amendment category's small sampling for the last two years, (only three cases for the 1997 Term and 1998 Term combined) it has not been as indicative of ideological positions as it has in the past.

156. For more information regarding frontier analysis, *see* Appendix B.

than their absolute scores. Boundaries or "frontiers" are defined by the highest and lowest scores in each category and each combination of categories. Each Justice is then evaluated relative to the established frontier. Moreover, by adjusting the relative weights allocated to each category, the frontier can be adjusted to reflect each category's effectiveness as determined by factor analysis.

We present liberal and conservative frontier data for the Court in Frontier Analysis Tables 1-4. Two versions of each frontier are presented. In Tables 1 and 2, we constrain the weights applied to each category according to the factor analysis hierarchy described above.[157] In other words, each Justice is allowed to "choose" the weights that produce the highest frontier score for him or her, subject to the limitation that Statutory Civil Rights cannot receive more weight than Criminal/State, Civil/State cannot receive more weight than Statutory Civil Rights, and so forth. Tables 3 and 4 apply no weighting constraints at all, allowing each Justice to "choose" those weights that present him or her in the most conservative or liberal light possible. Each table lists a "Percent of Frontier" score for each Justice. Those with a score of 100% reach the frontier by employing the category weight distribution shown in the category columns. Scores less than 100% indicate that the most conservative/liberal score the Justice could obtain with optimal weighting places him or her the indicated percentage of the way toward the frontier. In some cases, an optimal combination of weights may even place a Justice beyond the frontier. This condition is known as "superefficiency" and is noted in the charts when present.

Frontier Charts 1 and 2 show the constrained scores of each Justice over the course of this Study in graphical form. Near the bottom of each chart is an indication of new Justices replacing outgoing Justices on the Court. Although former Justices' scores are not indicated, they contributed to frontier determination during Terms in which they sat on the Court.

Frontier Charts 3 and 4 show each Justice's range of frontier scores during the course of this Study. They are easier to read than the line graphs and give a clearer picture of the Justice's relative positions and score ranges overall. They do not, however, show any trend information.

The Charts reveal several interesting trends. Frontier Chart 1 shows Justice Thomas making a superefficient conservative "splash"

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157. *See supra* note 20 and accompanying text.

during his first Term on the Court, then settling in around the frontier thereafter. Frontier Chart 2 shows clear and growing domination of the liberal frontier by Justice Stevens. [158]

Frontier Chart 3 shows that Chief Justice Rehnquist and Justices Kennedy, Scalia, O'Connor, and Thomas have all reached the conservative frontier at some point during the Study. In fact, the Chief Justice has demonstrated conservative superefficiency in each Term other than 1997. Frontier Chart 4 clearly displays Justice Stevens' superefficient liberal tendencies. In fact, Stevens so dominates the liberal frontier that only two other Justices, Breyer and Souter, have managed to touch the frontier. Justice Ginsburg is alone in reaching neither the liberal nor the conservative frontiers during her five Terms on the Court.

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158. *See infra* Frontier Analysis, Table 2. This superefficiency is due in large part to Justice Souter's lone vote in favor of the only First Amendment issue decided by the Court this Term.
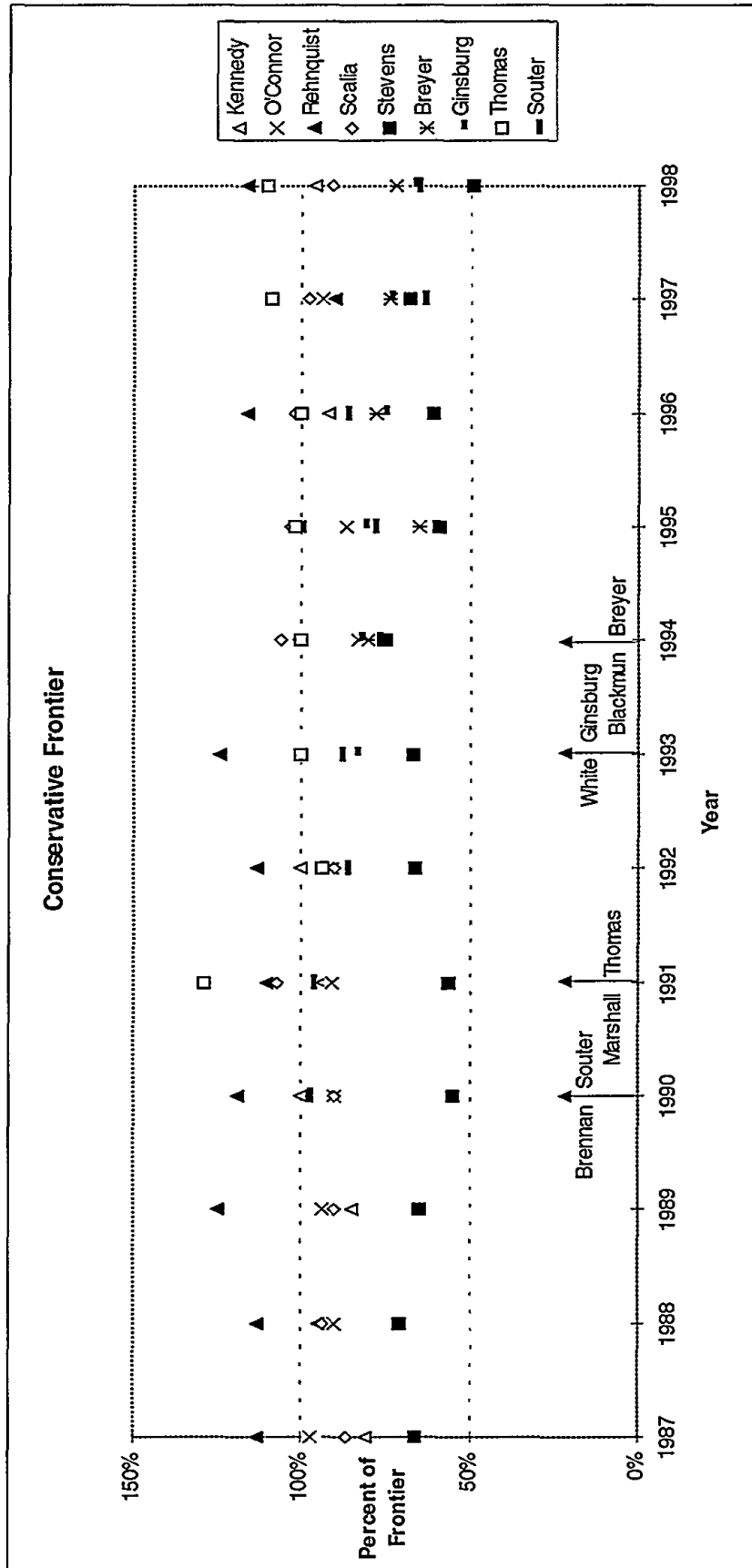
Frontier Analysis Table 1
"Conservative Frontier" – Constrained

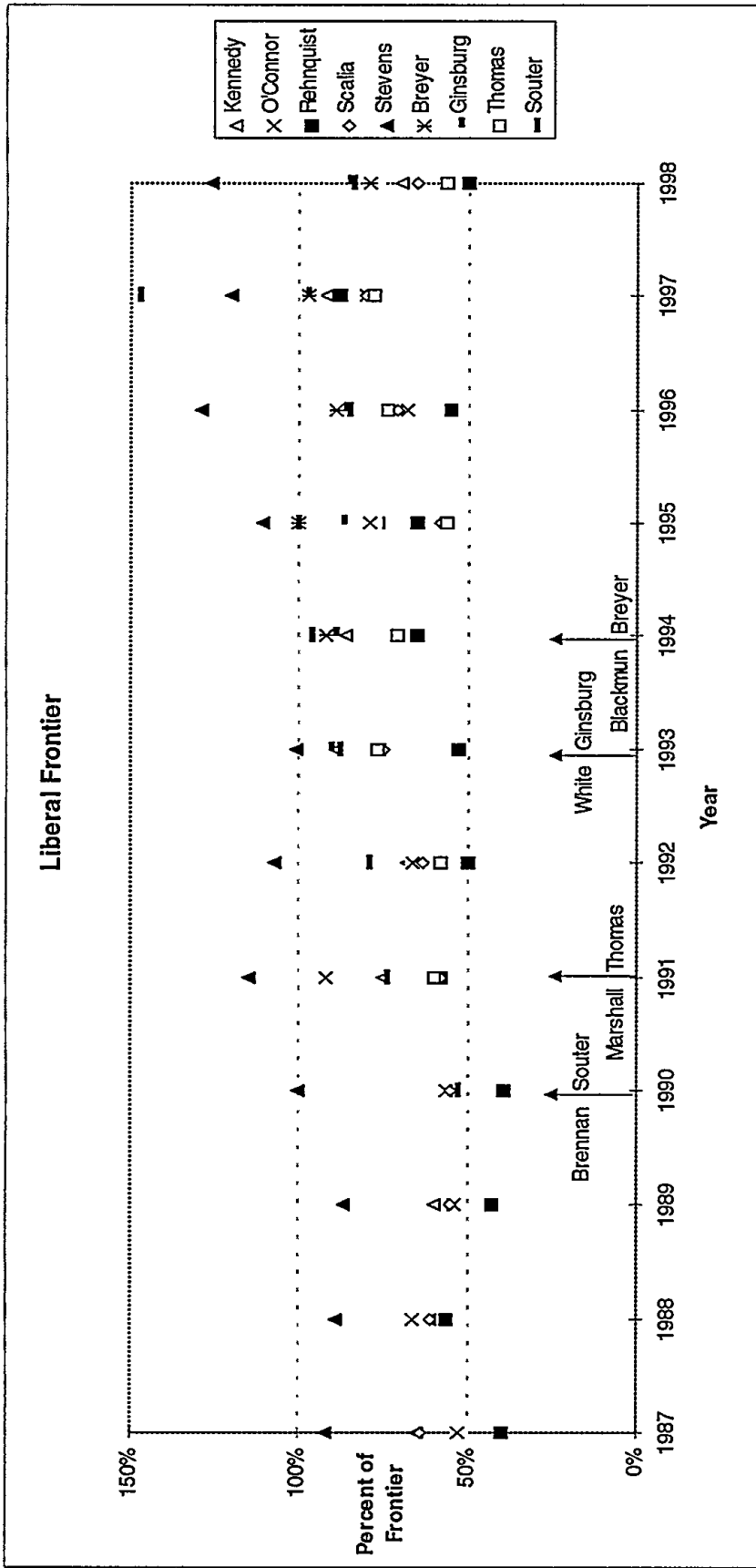| Justice	Percent of Frontier	Percent Super Efficient	Category Weights								
			Civil/ State	Civil/ Federal	Crim./ State	Crim./ Federal	1st Am.	Equal Protect	Stat. Civ. Rt.	Juris.	Fed'ism
Rehnquist	100%	116%	-	-	-	21	17	-	21	21	21
Thomas	100%	110%	-	-	100	-	-	-	-	-	-
O'Connor	100%	110%	-	-	-	100	-	-	-	-	-
Kennedy	96%		-	-	-	75	-	-	25	-	-
Scalia	91%		-	-	100	-	-	-	-	-	-
Breyer	72%		11	11	11	11	11	11	11	11	11
Ginsburg	66%		7	7	42	7	7	7	7	7	7
Souter	65%		11	11	11	11	11	11	11	11	11
Stevens	49%		7	7	7	42	7	7	7	7	7

FRONTIER ANALYSIS TABLE 2
"LIBERAL FRONTIER" – CONSTRAINED

JUSTICE	PERCENT OF FRONTIER	PERCENT SUPER EFFICIENT	CATEGORY WEIGHTS								
			CIVIL/ STATE	CIVIL/ FEDERAL	CRIM./ STATE	CRIM./ FEDERAL	1ST AM.	EQUAL PROTECT.	STAT. CIV. RT.	JURIS.	FED'ISM
Stevens	100%	126%	20	-	20	20	-	-	20	-	20
Ginsburg	85%		13	13	13	13	13	-	13	13	13
Souter	84%		13	13	13	13	13	-	13	13	13
Breyer	79%		17	-	17	17	-	-	17	17	17
Kennedy	70%		13	13	13	13	13	-	13	13	13
Scalia	64%		11	11	11	11	11	11	11	11	11
O'Connor	56%		11	11	11	11	11	11	11	11	11
Thomas	56%		11	11	11	11	11	11	11	11	11
Rehnquist	50%		13	13	13	13	13	-	13	13	13

FRONTIER ANALYSIS TABLE 3
"CONSERVATIVE FRONTIER" – UNCONSTRAINED

JUSTICE	PERCENT OF FRONTIER	PERCENT SUPER EFFICIENT	CATEGORY WEIGHTS								
			CIVIL/ STATE	CIVIL/ FEDERAL	CRIM./ STATE	CRIM./ FEDERAL	1ST AM.	EQUAL PROTECT.	STAT. CIV. RT.	JURIS.	FED'ISM
Rehnquist	100%	131%	-	-	-	-	41	-	59	-	-
O'Connor	100%	129%	-	61	-	30	9	-	-	-	-
Thomas	100%	118%	-	-	-	-	-	-	100	-	-
Scalia	100%	109%	-	36	-	-	-	-	-	64	-
Kennedy	100%		-	-	-	-	-	100	-	-	-
Stevens	100%		-	-	-	-	-	100	-	-	-
Breyer	100%		-	-	-	-	-	100	-	-	-
Ginsburg	100%		-	-	-	-	-	100	-	-	-
Souter	100%		-	-	-	-	-	100	-	-	-

FRONTIER ANALYSIS TABLE 4
"LIBERAL FRONTIER" – UNCONSTRAINED

JUSTICE	PERCENT OF FRONTIER	PERCENT SUPER EFFICIENT	CATEGORY WEIGHTS								
			CIVIL/ STATE	CIVIL/ FEDERAL	CRIM./ STATE	CRIM./ FEDERAL	1ST AM.	EQUAL PROTECT.	STAT. CIV. RT.	JURIS.	FED'ISM
Stevens	100%	129%	-	-	-	34	-	-	-	-	66
Kennedy	100%	117%	-	74	-	-	10	-	-	-	17
Breyer	100%	107%	-	69	-	-	-	-	31	-	-
Scalia	100%	105%	-	64	-	36	-	-	-	-	-
Souter	100%		-	-	-	-	100	-	-	-	-
Ginsburg	100%		-	-	-	-	100	-	-	-	-
Thomas	100%		-	-	-	-	100	-	-	-	-
Rehnquist	100%		-	100	-	-	-	-	-	-	-
O'Connor	85%		-	-	-	-	-	-	-	100	-

Conservative Frontier

Frontier Chart 1

Frontier Chart 2
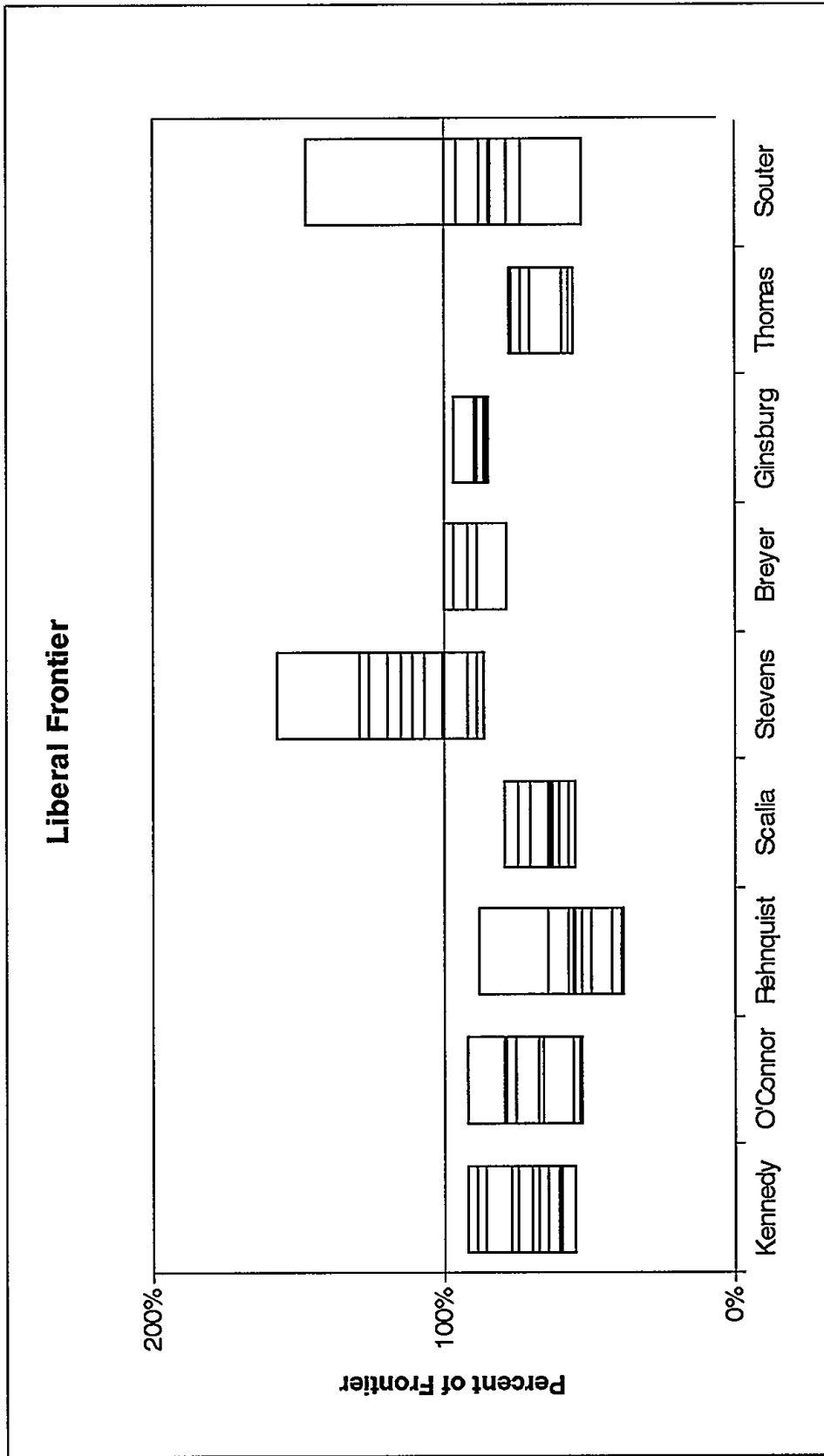
Frontier Chart 4

VII. Conclusion

The 1998 Term exhibits a strengthening trend in the Court's recent disposition to vote liberally on ideologically divided issues. Supporting this conclusion is the detected liberal movement in six of the ten categories, with three of the remaining four categories showing trivial conservative movement. Also, despite this Term's touted resurgence favoring States' rights, this Term shows that the Court still votes a strong 64.0% in favor of the federal government on federalism issues – a patently liberal result that contrasts with the results reached in the majority of this decade's Terms. Also strengthening is the Court's three-year trend favoring statutory civil rights claims with this Term's decade-high 64.7%. Finally, in swing-vote cases, which is perhaps the most reliable indicator of the Court's posture, the Court predominately favored liberal outcomes, with Justice O'Connor playing the key role. This is the second consecutive Term that the Rehnquist Court has voted predominately liberally on close cases decided by one vote, and the third time such a result has been reached in the past five Terms. This suggests that ideologically charged cases are yielding more and more liberal results. Combining these liberal indicators with the relatively minor conservative movements indicates that the Court may be more liberal than present commentary suggests. Indeed, for this professed "conservative" Court, a shift towards a liberal balance-of-power seems well in place and poised to expand in Terms to come.

APPENDIX A

1. The Universe of Cases

The only cases included in the database are those 1998 Term cases decided by full opinion. Decisions on motions have been excluded even if accompanied by an opinion. Cases handled by summary disposition are included only if they are accompanied by a full opinion of the Court and not if the only opinion is a dissent. Cases decided by a four-four vote resulting in affirmance without written opinion have been excluded. Both signed and unsigned per curiam opinions are considered full opinions if they set forth reasons in a more than perfunctory manner. Cases not fitting within any of these categories are not included in the database for any of the tables.

2. Cases Classified as Civil or Criminal

The classification of cases as civil or criminal follows commonly understood definitions. Generally, the nature of the case is clearly identified in the opinion. Only occasionally does a case pose a problem of classification. No cases in 1998 raised such a question.

3. Cases Classified by Nature of the Parties--Data Tables 1 through 4

Cases are included on Data Tables 1 through 4 only if governmental and private entities appear as opposing parties. This is necessarily true of criminal cases. Civil cases are excluded from these tables if they do not satisfy this criterion. The governmental entity might be the United States government or one of its agencies or officials, or, with respect to a state government, one of its political subdivisions. A suit against a government official in a personal capacity is included if that official is represented by government attorneys, or if the interests of the government are otherwise clearly implicated. In instances of multiple parties, a civil case is excluded if governmental entities appear on both sides of the controversy. If both a state and a federal entity are parties to the same suit on the same side with only private parties on the other, the case is included on Data Tables 1 and 2. A case is included more than once on the same table if it raises two or more distinct issues affecting the outcome of the case and the issues are resolved by different voting alignments.

4. Classification by Nature of the Issue–Data Tables 5 through 9

A case is included in each category of Data Tables 5 through 9 for which it raises a relevant issue that is addressed by written opinion. One case may thus be included on two or more tables. A case is also included more than once on the same table if it raises two or more distinct issues in the category affecting the disposition of the case and the issues are resolved by different voting alignments. A case is not included on a table if an issue raised by one of the litigants is not addressed in any opinion.

Identification of First Amendment and Equal Protection issues poses no special problem since the nature of each claim is expressly identified in the opinion. Issues of freedom of speech, press, association, and free exercise of religion are included. However, Establishment Clause cases are excluded since one party's claim of religious establishment is often made against another party's claim of free exercise or some other individual right, thus blurring the issue of individual rights.

Statutory civil rights included on Data Table 7 are limited to those invoking the Civil Rights Act of 1964, the Voting Rights Act of 1965, and other civil rights statutes expressly barring discrimination on the basis of race, color, national origin, sex, religion, age, or physical handicap. Actions brought under 42 U.S.C. § 1983 are included if the substantive right asserted is based on a federal statute, or if the issue involves the application of 42 U.S.C. § 1983 to the case at hand. However, 42 U.S.C. § 1983 actions are excluded if the substantive right asserted is based on the United States Constitution and the issue relates to that constitutional right. The purpose of this exclusion is to preserve the distinction between constitutional and non-constitutional claims.

For Data Table 8, jurisdictional questions are defined to include not only jurisdiction per se, but also standing, mootness, ripeness, abstention, equitable discretion, and justiciability. Jurisdictional questions are excluded if neither party challenges jurisdiction and no member of the Court dissents on the question, even though the Court may comment on its jurisdiction.

Federalism cases on Data Table 9 are limited to those cases in which there were issues raised by conflicting actions of federal and state or local governments. Common examples of these issues are preemption, intergovernmental immunities, application of the Tenth and Eleventh Amendments as a limit on federal government action, and federal court interference with state court activities (other than

review of state court decisions). Issues of "horizontal" federalism or interstate relationships, such as those raised by the dormant Commerce Clause or the Privileges and Immunities Clause, are excluded from the table.

5.   The Swing Vote Cases

Data Table 10 includes all cases where the outcome turns on a single vote. This category also includes five-four decisions and four-three decisions, if any, as well as five-three and four-two decisions that reverse a lower court decision. Affirmances by a vote of five-three or four-two are not included because a shift of one vote from the majority to the minority position would still result in affirmance by a tie vote. A case is included more than once in the table if it raises two or more distinct issues affecting the disposition of the case and the issues are resolved by different voting alignments.

APPENDIX B

Study Methodology

This Study seeks to quantify three characteristics of Supreme Court voting behavior: voting trends, mean voting percentages, and relationships among the Justices' voting patterns. We analyze these characteristics both for the Court as a whole and for individual Justices.[159] The following sections explain the statistical methods employed in this Study and how test results should be interpreted.

A. Scores

Each score in this Study is simply the percentage of times a Justice voted in favor of the party or claim specified by the category. Some categories contain fewer samples than others, resulting in coarser score increments.

B. Predictive Modeling

Data in this project were fitted to an Auto Regressive Integrated Moving Average (ARIMA) forecasting model.[160] This model is useful in circumstances where, as in this Study, a single variable (a Justice's score) is to be forecast based only on its present and prior values with no other explanatory variables. ARIMA modeling is most easily explained by starting in the middle of the acronym:

Integrated: This refers to a differencing process which operates in a manner similar to differentiation of a continuous function in calculus. The goal is simply to remove trend from the time series data by subtracting each score in the time series from the next score in the series. The resulting differences form a new time series. This operation may be repeated successively until a trendless or "stationary" series results. Our model employs only one differencing operation.

Auto-Regression: Once the series has been made stationary, an autoregressive parameter may be determined.[161] This parameter

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159. Our ability to analyze newer Justices' voting patterns may be restricted or precluded in some instances due to insufficient data.

160. ARIMA computer modeling was accomplished using MINITAB® statistical software with p = 1, d = 1, and q = 1. For more information regarding the ARIMA (p,d,q) model, *see* PETER KENNEDY, A GUIDE TO ECONOMETRICS 248-49 (1992).

161. Many statistical models employ more than one autoregressive parameter due to various properties of the data series. Our data series produces the most accurate forecasts with single-parameter (first order) AR and MA models.

seeks to relate each data point in the stationary series to the data point immediately preceding it through multiplication. That is:

$$X_t = AX_{t-1}$$

where X_t is the value of the data series at point t, A is the autoregressive parameter, and X_{t-1} is the value of the data series point immediately preceding X_t.

Because we are dealing with a *series* of data points, however, a single parameter will almost never precisely produce the relationship just described for all data point pairs. Some error is inevitable. We therefore seek to determine that parameter which produces the least total error when applied to the entire series.[162]

Moving Average: A second parameter is determined that relates the value of each series element X_t to the *error* between the estimated value and the actual value of the previous element X_{t-1}.[163] That is:

$$X_t = -Bx_{t-1}$$

where -B is the Moving Average parameter. The value of this parameter is also optimized to minimize its total error when applied to the series.

Synthesis:The previous operations are combined into the equation:

$$X_t = Ax_{t-1} - Bx_{t-1} + E_t$$

where E_t represents the residual error remaining between the calculated and actual values of X_t. This final equation is used to predict the score for the following Term.

C. Mean Testing

We use a "student's t test"[164] to determine whether this Term's score (X_2), departs in a statistically significant manner from the mean of all previous Terms' scores (X_1). Essentially, we treat these two numbers as the means of two independent samples drawn from the universe of all scores in the category.[165] We hypothesize that X_1 is also

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162. This is accomplished by applying least squares estimation, i.e., the parameter is chosen such that the sum of the squared errors is minimized.

163. Although this operation may not seem as intuitive as the autoregression operation, it may help to think of the error terms as "'shocks' that initially set the process in motion and continue to keep it in motion thereafter." JOHN C. HOFF, A PRACTICAL GUIDE TO BOX-JENKINS FORECASTING 51 (1983).

164. For a practical perspective on this procedure, see DAVID S. MOORE & GEORGE P. MCCABE, INTRODUCTION TO THE PRACTICE OF STATISTICS 500-18 (1993). *See also* CRAIG & HOGG, *supra* note 42.

165. This approach introduces potential bias problems due to non-random sampling, small samples, and dissimilar sample standard deviations. Nevertheless, we use the test to

the true mean of the population μ, and we set up this hypothesis (the "null" hypothesis) and its corresponding alternative hypothesis as follows:

H_o: μ = X_1 The "null" hypothesis, i.e., X_2 does not significantly shift μ from its previous value on the real number line. Therefore, the two samples are statistically equivalent.

H_a: μ· X_1 The alternative hypothesis, i.e., X_2 significantly shifts μ from its previous value on the real number line. Therefore, the two samples are not statistically equivalent.

We then set out to prove the alternative hypothesis, within a certain confidence interval,[166] by rejecting the null hypothesis.[167] This is accomplished by calculating the following statistic:

$$t = \frac{\overline{X_2} - \mu}{s / \sqrt{n}}$$

The result of this equation (t) is compared to the entry on a t-distribution table corresponding to the confidence interval desired (•) and the appropriate number of degrees of freedom (n-k).[168] If the absolute value of t is greater than the table entry, H_o is rejected and we say that the Justice has shown a statistically significant change in voting behavior this Term.

D. Correlation

Relationships between two Justices' voting records may be mapped over a two-dimensional Cartesian plane as in Figures 1 and 2. Figure 1 shows a high degree of positive correlation (R^2=0.7921) between the voting percentages of the Chief Justice and Justice Scalia for the Equal Protection category. The points all fall close to an upward sloping line. On the other hand, Figure 2 shows that the voting percentages of the Chief Justice and Justice Stevens show only a very weak, negative correlation (R^2=0.0473). The points are widely scattered about a downward sloping line. Statistically significant correlations between and among Justices' Term-to-Term voting

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impose some measure of discipline in analyzing the available data.

166. We have selected a confidence interval of 95%. Because this is a two-tailed test X_2 may shift μ in either a positive or negative direction = .025.

167. A full description of the logic behind this seemingly convoluted procedure is beyond the scope of this article. However, its purpose is to control Type I (or alpha) error. For a complete explanation, see MOORE & MCCABE, supra note 164.

168. k = the number of parameters being tested; here, μ is the only hypothesized parameter, so k = 1.

patterns are shown in Regression Tables 1-10. The first number in each pair is the Pearson correlation coefficient. The second number is an R^2 statistic.[169] Notice that Justices, such as Justice Breyer, for whom we have few data points, are especially likely to show high Pearson coefficients, but low R^2 statistics. The latter is a more reliable measure of the actual level of correlation.
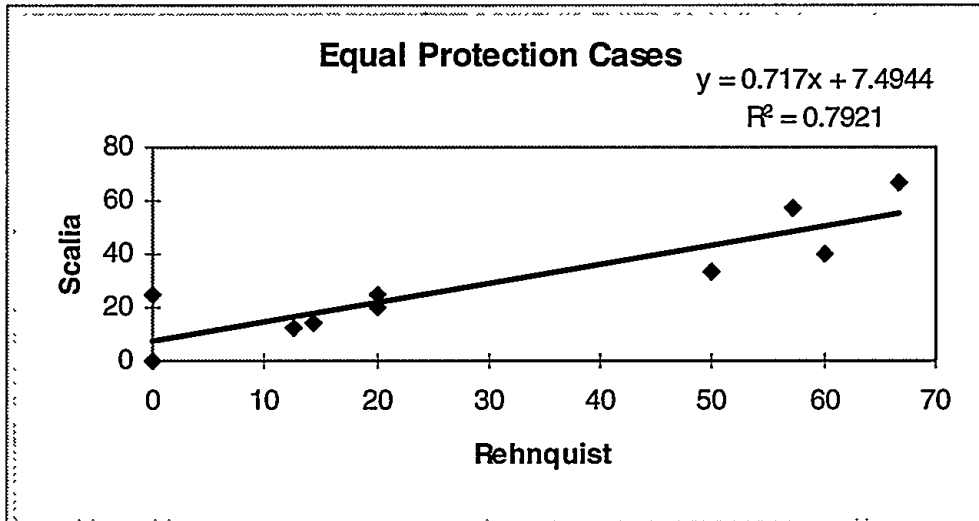

Equal Protection Cases

$y = 0.717x + 7.4944$
$R^2 = 0.7921$

Figure 1

Equal Protection Cases
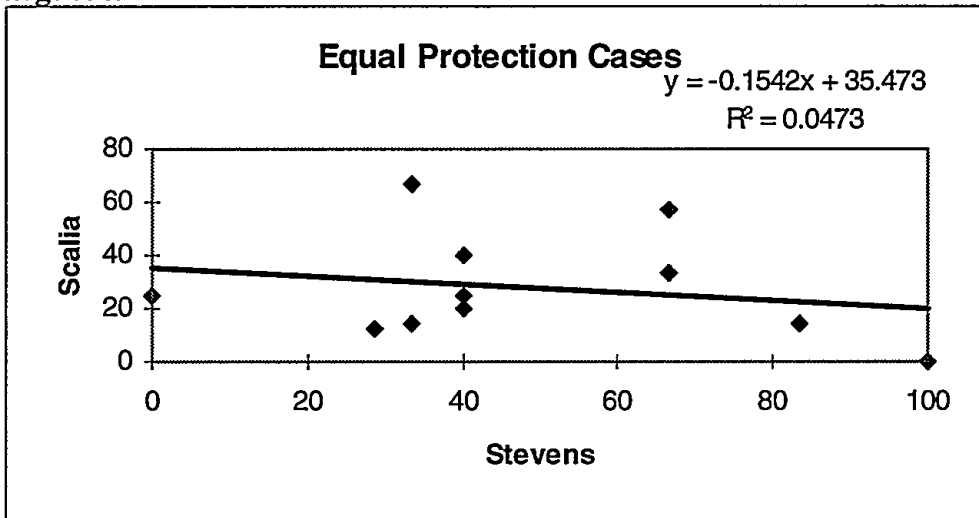
$y = -0.1542x + 35.473$
$R^2 = 0.0473$

Figure 2

The correlation measured in this case is in the Term-to-Term movement of Justices' scores. A high correlation between two Justices does not mean that they necessarily vote together often. It simply means that their scores tend to move up and down together

169. The r^2 statistic is an estimate of $\bullet^2$, the true measure of correlation between the dependant variable and its independent counterpart(s). The "adjusted" r^2 value in the tables is a result of the computer's attempts to filter out any bias in the original r^2 result.

from one Term to another. Also note that correlation in no way implies causation.

E. Factor Analysis

Factor analysis has long been used by psychologists who attempt to identify characteristics of personality or intelligence by using batteries of tests. Their challenge has been to develop tests that validly measure the characteristics of interest. This Study similarly attempts to measure the Justices' liberal and conservative leanings by "testing" their disposition of certain types of cases.

We performed a factor analysis of the Study categories using Minitab software from Minitab, Inc. The factor loadings presented were obtained by applying a QMAX rotation to the data. A full description of the theory and mathematics underlying factor analysis is beyond the scope of this appendix, but several books on the subject provide reasonably simple explanations of this complex process.[170]

F. Frontier Analysis

Frontier analysis can probably best be described with an example. Suppose four individuals are competing for the title of "world's greatest athlete." Their scores in two events are listed in the following table:

	Croquet	Marbles
Alan	9	2
Betty	7	7
Chuck	4	5
Debbie	3	8

Alan's agent would argue that the title should go to the best croquet player, while Debbie's agent would argue that the best marbles player should win. Betty's agent would argue that each sport should receive equal weight. To see why, weight each of the scores above by 50% and add each athlete's resulting scores together. Alan would score $(9 \times 0.5) + (2 \times 0.5) = 5.5$. Betty would score $(7 \times 0.5) + (7 \times 0.5) = 7$. Chuck's score would be 4.5, and Debbie's score would be 5.5. The situation is presented graphically in the following figure:

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170. *See generally* DENNIS CHILD, THE ESSENTIALS OF FACTOR ANALYSIS (2d ed. 1990).

Athletic Frontier

Key

A = Alan
B = Betty
C = Chuck
D = Debbie
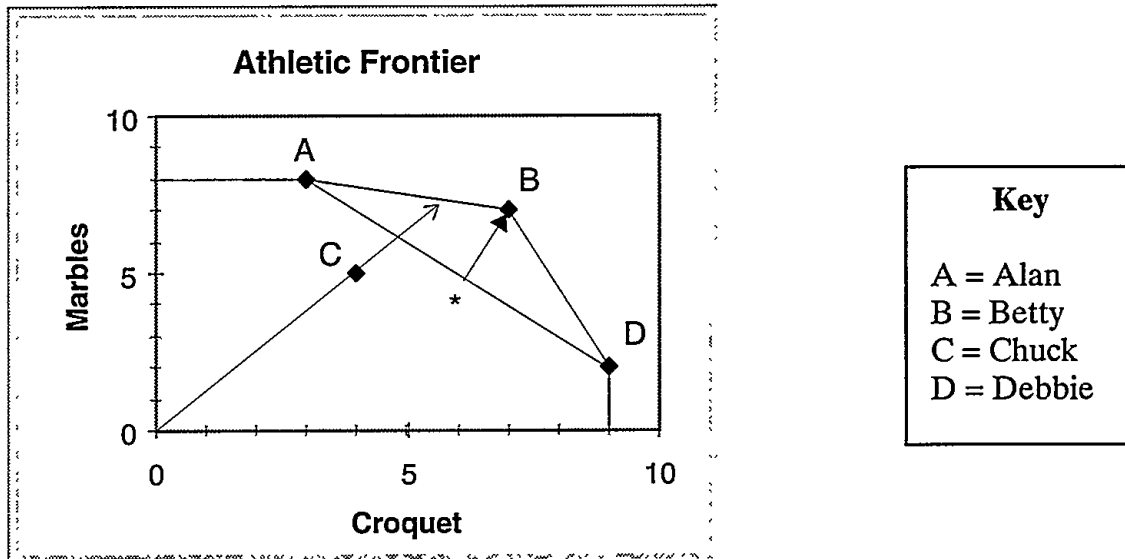
A, B, C, and D represent the athletes. The solid line connecting A, B, and D represents the athletic frontier, i.e., the boundary beyond which no athlete has performed regardless of the relative weights assigned to marbles and croquet. A, B, and D are located at 100% of the frontier. Moreover, B can be said to be super-efficient to the extent it lies beyond the line AD connecting the two points adjacent to it on the frontier A and D are also super-efficient to the extent they lie beyond lines (not shown) connecting B with the points at which the frontier meets each axis. C falls short of the frontier regardless of the weights assigned to marbles and croquet. However, an optimal set of weights may be selected such that C "looks his best," i.e., he comes closest to reaching the frontier.

The same concept can be applied to the Court to determine which Justice is "most conservative" or "most liberal." However, instead of two dimensions (croquet and marbles), the Court analysis includes nine dimensions (all Study categories except Swing Votes). Although human minds have difficulty envisioning nine dimensions, computers can handle the required calculations with ease. We performed our analysis using Microsoft Excel's solver feature. Although the formulas and procedures involved are straightforward, a complete description of them is beyond the scope of this appendix.[171]

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171. For more information on frontier analysis, *see generally* DONALD L. ADOLPHSON, MANAGER'S TOOLKIT: MANAGERIAL SPREADSHEET ANALYSIS (1998).