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THE MOST DANGEROUS JUSTICE: THE SUPREME COURT AT THE BAR OF MATHEMATICS*

PAUL H. EDELMAN** & JIM CHEN***

ABSTRACT

We analyze the relative voting power of the Justices based upon Supreme Court decisions during October Term 1994 and October Term 1995. We take two approaches, both based on ideas derived from cooperative game theory. One of the measures we use has been used in connection with voting rights cases. After naming the Most Dangerous Justice, we conclude by identifying and explaining the inverse relationship between seniority and voting power.

I. OF POWER AND PROPORTIONALITY

Who is the most dangerous Supreme Court Justice? Or, speaking more generally, what makes any one Justice on a Court of equals a bit more equal than the others?[1] In an ironic twist for an institution that turned "one person, one vote" into a bedrock constitutional principle,[2] the Justices apparently do not cast votes of equal weight. Virtually every observer of the Court believes that certain Justices are more powerful—or more dangerous, if you prefer—than their counterparts. The belief is widespread; the proof, somewhat harder to find. If fulfilled, however, the quest for the root of Supreme Court voting power can prove quite rewarding, for the question of relative influence

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    1. *Cf.* GEORGE ORWELL, ANIMAL FARM 112 (1946) ("all animals are equal but some animals are more equal than others").
    2. *See, e.g.,* Reynolds v. Sims, 377 U.S. 533, 558 (1964); Wesberry v. Sanders, 376 U.S. 1, 18 (1964); Gray v. Sanders, 372 U.S. 368, 381 (1963).

among the Justices holds the keys to the far more complex and elusive questions of judicial greatness[3] and judicial obscurity.[4]

Hypotheses on Supreme Court voting power fall into two broad categories. The first ascribes the power differential to discrepancies in political savvy, as epitomized by Bob Woodward and Scott Armstrong's depiction of William Brennan as an ideologically outnumbered but stunningly effective liberal member of the Burger Court.[5] This hypothesis portrays the powerful Justice as an *active strategist*, one who can leverage himself or herself into a position of greater influence regardless of the Justices' collective ideology. At an extreme, the Justice as strategist can assemble a coalition so improbable that the resulting majority opinion lacks any doctrinal coherence.[6]

A second hypothesis posits that certain Justices cast relatively weightier votes simply by virtue of their ideological position within the Court. This hypothesis assumes that a moderate Justice can gain greater influence merely by being a *passive swing voter*. Moderates such as Lewis F. Powell, Jr., and Sandra Day O'Connor are often perceived to have cast the fifth and decisive vote in closely contested cases. Under this view, the "median Justice" is the Court's equivalent of other political institutions' "median legislator,"[7] whose preferences dictate the overarching institutional preferences of the voting body.[8]

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3. *See generally* RICHARD A. POSNER, CARDOZO: A STUDY IN REPUTATION (1990) (developing a portrait of an important legal mind and a model for a new kind of study assessing a judicial career).

4. *See generally* David P. Currie, *The Most Insignificant Justice: A Preliminary Inquiry*, 50 U. CHI. L. REV. 466 (1983); Frank H. Easterbrook, *The Most Insignificant Justice: Further Evidence*, 50 U. CHI. L. REV. 481 (1983).

5. *See* BOB WOODWARD & SCOTT ARMSTRONG, THE BRETHREN: INSIDE THE SUPREME COURT *passim* (1979).

6. *See* Mark Tushnet, *The Optimist's Tale*, 132 U. PA. L. REV. 1257, 1263 (1984) (describing Justice Brennan's majority opinion in Plyler v. Doe, 457 U.S. 202 (1982), in precisely these terms).

7. *See, e.g.,* George A. Costello, *Average Voting Members and Other "Benign Fictions": The Relative Reliability of Committee Reports, Floor Debates, and Other Sources of Legislative History*, 1990 DUKE L.J. 39, 61-64; William N. Eskridge, Jr. & John Ferejohn, *The Article I, Section 7 Game*, 80 GEO. L.J. 523, 528-29 (1992); William N. Eskridge, Jr. & Philip P. Frickey, *The Supreme Court, 1993 Term — Foreword: Law as Equilibrium*, 108 HARV. L. REV. 26, 33 n.24 (1994); Daniel A. Farber, *Legislative Deals and Statutory Bequests*, 75 MINN. L. REV. 667, 689 (1991); Daniel A. Farber & Philip P. Frickey, *Legislative Intent and Public Choice*, 74 VA. L. REV. 423, 436-37 (1988).

8. For further clarifications and criticisms of the method of measuring institutional preferences through a real or hypothetical "median voter," see MAXWELL L. STEARNS, PUBLIC CHOICE AND PUBLIC LAW: READINGS AND COMMENTARY 126-29 (1997); Randall G. Holcombe, *An Empirical Test of the Median Voter Model*, 18 ECON. INQUIRY 260 (1980); Harold Hotelling, *Stability in Competition*, 39 ECON. J., 41, 42-57 (1981); Thomas Romer & Howard Rosenthal,

In his day, Justice Powell, as the Court's "swing voter," played a prominent role in several highly visible constitutional controversies. In two of the Burger Court's best known constitutional decisions, he punctuated his decisive vote with opinions so moderate that they persuaded none of his colleagues.[9] On today's Court, Sandra Day O'Connor has perfected the role of the "median Justice."[10] She singlehandedly unites the "active strategist" and "passive swing voter" theories of Supreme Court voting. Evidently it takes more than fortuitous political positioning to become the architect of *Adarand Constructors, Inc. v. Pena*,[11] *Shaw v. Reno*,[12] *Planned Parenthood of Southeastern Pennsylvania v. Casey*,[13] *City of Richmond v. J. A. Croson Co.*,[14] and *Mississippi University for Women v. Hogan*.[15] Whereas Justice Powell may be better remembered for staking out unique legal ground,[16] Justice O'Connor has actively united working coalitions in some of the Court's most prominent decisions. Whether or not these opinions articulate a discernibly "feminine voice" in her constitutional opinions,[17] one aspect of Justice O'Connor's legacy lies beyond dispute. She is the Court's consummate "accommodationist."[18]

No matter how intuitively attractive and seemingly accurate, these hypotheses about Supreme Court voting remain just that, and the evidence marshaled on their behalf has been entirely anecdotal. We now propose a rigorous analysis of voting patterns on the

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The Elusive Median Voter, 12 J. PUB. ECON. 143 (1979); Charles K. Rowley, *The Relevance of the Median Voter Theorem*, 140 J. INST. & THEORETICAL ECON. 104 (1984).

   9. *See* Bowers v. Hardwick, 478 U.S. 186, 197-98 (1986) (Powell, J., concurring); Regents of the Univ. of Cal. v. Bakke, 438 U.S. 265, 269 (1978) (opinion of Powell, J., announcing the judgment of the Court); *see also* JOHN C. JEFFRIES, JR., JUSTICE LEWIS F. POWELL, JR. 526 (1994) ("In *Bakke*, Powell found a way to translate his conviction into a legal judgment and in so doing to dominate the decision of a divided Court. But in *Bowers* he did just the opposite, . . . muffling his own quite different views in a throwaway concurrence.").

   10. *See, e.g.*, DAVID G. SAVAGE, TURNING RIGHT: THE MAKING OF THE REHNQUIST SUPREME COURT 225 (1992) (describing O'Connor as the Court's "pivotal Justice" who "held the balance on abortion, affirmative action, religion, and the death penalty").

   11. 115 S. Ct. 2097 (1995).

   12. 509 U.S. 630 (1993).

   13. 505 U.S. 833 (1992).

   14. 488 U.S. 469 (1989).

   15. 458 U.S. 718 (1982).

   16. *See* Plyler v. Doe, 457 U.S. 202, 236 (1982) (Powell, J., concurring); cases cited *supra* note 9.

   17. *See* Suzanna Sherry, *Civic Virtue and the Feminine Voice in Constitutional Adjudication*, 72 VA. L. REV. 543 (1986).

   18. *See* NANCY MAVEETY, JUSTICE SANDRA DAY O'CONNOR: STRATEGIST ON THE SUPREME COURT (1996).

Supreme Court in order to test these widely held beliefs about the relative influence of individual Justices.

Part II of this Article identifies all winning coalitions of Justices during October Term 1994 and October Term 1995—that is, all sets of five or more Justices who joined a single opinion in any case during those Terms. (Our analysis begins with the 1994 Term because it was the first Term in which all of the current Justices—Rehnquist, Stevens, O'Connor, Scalia, Kennedy, Souter, Thomas, Ginsburg, and Breyer—served together.) We define a measure of voting strength based solely on the record of the Justices' voting alignments, without resorting to subjective and error-prone guesses about the Justices' political proclivities.

Mindful of the limits on the data available from one or two terms of the court, we then use these data in Part III to interpolate what all of the possible voting coalitions might be. We then extend the theory of cooperative games to derive a voting index based on these (and only these) putative coalitions. In Part IV of this Article, we announce the results of our two models and crown the Most Dangerous Justice. Oddly enough, the junior Justices seem to outvote their colleagues. In Part V, we address the apparent inverse relationship between voting power and seniority and speculate on possible explanations for this peculiar phenomenon.

II. THE MOST SIGNIFICANT JUSTICE:
A PRELIMINARY INQUIRY

In building our basic model of Supreme Court voting, we take a naïve look at the winning coalitions of Justices from October Term 1994, October Term 1995, and the two Terms taken together. We then construct a voting power index based solely on that information. The key idea is that the only time that an individual Justice's vote matters is when he is in a coalition of exactly five Justices. In such a coalition, the defection of any one Justice would make losers of the other four. Since each Justice is as much a "swing voter" as any of the others in this fragile coalition of five, voting power is equally distributed among the prevailing Justices (twenty percent each).

Therefore, over a Term or a stretch of Terms, an individual Justice's voting power may be expressed as the percentage of the time that the Justice is in a five-member coalition, less the eighty percent of the voting power attributable to the four other members of each coalition. We count only the number of times in which a particular

Justice appears in any five-Justice coalition. We *do not* take into account the number of cases decided by any particular coalition. This method allows us to measure how the Court's "coalitional deep structure," or the plausibility of particular coalitions among the Justices, affects voting power. In other words, we are more interested in a particular Justice's ability to form coalitions with certain other Justices than in the number of cases that any single coalition happens to decide during a Supreme Court Term.

We deliberately reject one aspect of cooperative game theory as it is conventionally used to measure differences in power within a voting system. Most such applications of game theory assume that coalitions may freely form within any given population of voters. In other words, game-theoretic analyses of voting typically assume that the probability that any given coalition of voters will emerge depends only on the size of the coalition.[19] We have chosen to abandon this assumption. The crux of our analysis lies in the *number of different coalitions* that any single Justice has actually joined or is theoretically capable of joining, based on extrapolations from that Justice's voting record.

In certain voting systems, not all possible coalitions will form. The Supreme Court is one such system; so are most legislative elections in the United States. The Court itself has acknowledged that the usual rules of pluralist democracy do not apply in electoral situations scarred by racial bloc voting.[20] A pattern "showing that a significant number of minority group members usually vote for the same candidates" not only proves "political cohesiveness" within that group; when coupled with evidence of a countervailing (and usually supervening) "white bloc vote," racial bloc voting suggests that certain multiethnic coalitions are simply implausible.[21]

Likewise, in an ideologically fractured Supreme Court, certain coalitions among the Justices are more likely than others, and some

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19. Specifically, the Shapley-Shubik index assumes that every linear ordering of voters is equally likely, whereas the Banzhaf index assumes that every possible coalition is equally likely. *See generally* ALAN D. TAYLOR, MATHEMATICS AND POLITICS: STRATEGY, VOTING, POWER AND PROOF 63-90, 205-37 (1995); Philip D. Straffin, Jr., *Power Indices in Politics, in* 2 MODULES IN APPLIED MATHEMATICS: POLITICAL AND RELATED MODELS 256, 262-68 (Steven J. Brams, William F. Lucas & Philip D. Straffin, Jr. eds., 1983). For a more complete explanation of the Shapley-Shubik index, see *infra* notes 62-64 and accompanying text. For a more complete explanation of the Banzhaf index, see *infra* notes 81-83 and accompanying text.

20. *See, e.g.,* Thornburg v. Gingles, 478 U.S. 30, 46-61 (1986).

21. *Id.* at 56; *accord* Growe v. Emison, 507 U.S. 25, 40 (1993); Voinovich v. Quilter, 507 U.S. 146, 157 (1993).

may be entirely implausible. (The educated naysayer can name oddball cases such as *Texas v. Johnson*[22] and *Harper v. Virginia Department of Taxation*,[23] but there is a reason these cases are oddball cases.)[24] Any given coalition of Justices may be so ideologically incompatible that there is no conceivable legal issue on which these Justices *and these Justices alone*, to the exclusion of their colleagues, will agree.[25] Even if we ignore ideology, the Court's actual voting patterns should persuade us that not all possible coalitions will emerge on the Court, that some blocs simply will not form. There are exactly 126 combinations of five Justices (or working majorities, if you prefer) on a Court of nine Justices.[26] As we report in Tables 2.1.1 and 2.1.2 below, only eleven such coalitions, or fewer than a tenth of all theoretically possible five-Justice alliances, actually appeared in the 1994 Term, and even fewer appeared in the 1995 Term. We will therefore suspend the traditional game-theoretic assumption that all potential coalitions among Supreme Court Justices are equally likely.

It is possible, of course, to base a quantitative analysis of the Supreme Court's voting patterns not only on the number of different coalitions, but also on the number of cases that each different coalition decides. For example, in its tabulation of each Term's 5-4 decisions, the *Harvard Law Review*'s annual survey of the Supreme Court reports the number of decisions decided by each different five-Justice coalition.[27] Brigham Young University's annual survey of the Court

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22. 491 U.S. 397 (1989) (majority opinion by Brennan, J., joined by Marshall, Blackmun, Scalia, & Kennedy, JJ.).

23. 509 U.S. 86 (1993) (majority opinion by Thomas, J., joined by Blackmun, Stevens, Scalia, & Souter, JJ.).

24. Both *Johnson* and *Harper* united the Court's "liberal" and "conservative" blocs, largely to the exclusion of moderate and moderately conservative Justices. *See* Maxwell L. Stearns, *Standing and Social Choice: Historical Evidence*, 144 U. PA. L. REV. 309, 356 (1995) (describing multipeaked political preferences in the Burger and Rehnquist Courts according to three political blocs: liberal, moderate, and conservative). According to Maxwell Stearns, standing doctrine provides the Court an endogenous rule by which to defer decisions on the merits of such "politically divisive rulings." *See id.* at 363. Thus, cases that tend toward oddball alignments of Justices are prime candidates for dismissal for want of standing.

25. We propose the following parlor game for Supreme Court junkies. Given any unique coalition of Justices, construct a case in which that coalition will vote to affirm and all of the other Justices will vote to reverse.

26. The number of five-Justice combinations on the Supreme Court is:

$$\frac{9!}{4! \cdot 5!}$$

27. *See, e.g., The Supreme Court, 1994 Term — Leading Cases*, 109 HARV. L. REV. 111, 343 (1995) [hereinafter *1994 Harvard Survey*]; *The Supreme Court, 1995 Term—Leading Cases*, 110 HARV. L. REV. 135, 370 (1996) [hereinafter *1995 Harvard Survey*].

explicitly counts the number of apparent "swing votes" a particular Justice casts during a Term rather than the number of different coalitions that a Justice seems capable of joining.[28] This methodology does measure the individual Justices' proclivity to cast "swing votes" in a crucial sense. The more often a coalition comes together, the more thoroughly it reinforces the perception that its members are acting as a cohesive "bloc."

For instance, consider the Justices most widely believed to be the five most conservative members of today's Court. According to the *Harvard Law Review*, the coalition consisting of William Rehnquist, Sandra Day O'Connor, Antonin Scalia, Anthony Kennedy, and Clarence Thomas combined to render at least six 5-4 decisions during the 1994 Term[29] and as many as seven during the 1995 Term.[30] But the only way to tell whether Justice Kennedy or Justice Thomas is more likely to defect from this bloc is to study these Justices' demonstrated ability to join other coalitions. Useful distinctions among individual Justices' voting power thus depend less on the number of times a particular coalition is successful and more on the number of different coalitions that each individual Justice is ideologically able to join.

If all of the Justices had equal power, they each would possess one-ninth of the Court's total voting power, or approximately 11.1%. To express this baseline in somewhat different terms, we would expect each Justice to appear in five-ninths of the five-Justice coalitions on a Court where all coalitions were plausible. Divided by five, this rate of participation would yield a power rating of 11.1 for each Justice.

Eleven distinct five-Justice coalitions formed during the 1994 Term. Nine were identified in the *Harvard Law Review*'s list of 5-4 decisions;[31] we have added two coalitions in order to reflect

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28. *See, e.g.*, Richard G. Wilkins, Scott M. Petersen, Matthew K. Richards & Ronald J. Tocchini, *Supreme Court Voting Behavior: 1994 Term*, 23 HASTINGS CONST. L.Q. 1, 27, 43-46 (1995).

29. *See 1994 Harvard Survey, supra* note 27, at 343. This coalition arguably decided a seventh case in the 1994 Term. *See infra* note 36.

30. Gray v. Netherland, 116 S. Ct. 2074 (1996); Shaw v. Hunt, 116 S. Ct. 1894 (1996); Bowersox v. Williams, 116 S. Ct. 1312 (1996) (per curiam); Seminole Tribe v. Florida, 116 S. Ct. 1114 (1996); Wood v. Bartholomew, 116 S. Ct. 7 (1995) (per curiam); Netherland v. Tuggle, 116 S. Ct. 4 (1995) (per curiam); *see also* Lewis v. Casey, 116 S. Ct. 2174, 2178-84 (1996) (Scalia, J., writing for himself, Rehnqnist, C.J., and O'Connor, Kennedy and Thomas, JJ., in part II of his opinion).

31. *See 1994 Harvard Survey, supra* note 27, at 343.

disagreements that had the potential to alter the precedential value of the majority opinion in a significant way.[32]

TABLE 2.1.1: FIVE-JUSTICE COALITIONS DURING THE 1994 TERM

1. Rehnquist, Stevens, O'Connor, Kennedy, Souter[33]
2. Rehnquist, Stevens, Kennedy, Souter, Ginsburg[34]
3. Rehnquist, Stevens, Kennedy, Ginsburg, Breyer[35]
4. Rehnquist, O'Connor, Scalia, Kennedy, Thomas[36]
5. Rehnquist, O'Connor, Scalia, Thomas, Breyer[37]
6. Rehnquist, Scalia, Kennedy, Thomas, Ginsburg[38]
7. Rehnquist, Kennedy, Souter, Ginsburg, Breyer[39]
8. Stevens, O'Connor, Kennedy, Ginsburg, Breyer[40]
9. Stevens, O'Connor, Souter, Ginsburg, Breyer[41]
10. Stevens, Scalia, Kennedy, Souter, Ginsburg[42]

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32. In *Oklahoma Tax Comm'n v. Jefferson Lines, Inc.*, 115 S. Ct. 1331 (1995), Justices Scalia and Thomas concurred in the five-Justice majority's judgment that "Oklahoma's tax on the sale of transportation services does not contravene the Commerce Clause." *Id.* at 1346. But these Justices' concurrence in the judgment rested on their clear and legally significant declaration that the precedent invoked by the Court, Complete Auto Transit, Inc. v. Brady, 430 U.S. 274 (1977), deserved "its rightful place . . . among the other useless and discarded tools of [the Court's] negative-Commerce-Clause jurisprudence." 115 S. Ct. at 1346 (Scalia, J., joined by Thomas, J., concurring in the judgment).

In *American Airlines, Inc. v. Wolens*, 115 S. Ct. 817 (1995), a single defection from the majority's 5-3 margin of decision would have resulted in an affirmance of the decision below by an equally divided vote. *See also id.* at 827 (noting that Scalia, J., took no part in the consideration or decision of this case). The resulting *per curiam* affirmance not only would have eliminated a substantive, fully reasoned opinion from *United States Reports*; it would have changed a partial reversal of the Illinois Supreme Court into an across-the-board affirmance.

33. Gustafson v. Alloyd Co., 115 S. Ct. 1061 (1995) (Kennedy, J.).

34. Oklahoma Tax Comm'n v. Jefferson Lines, Inc., 115 S. Ct. 1331 (1995) (Souter, J.).

35. Commissioner v. Schleier, 115 S. Ct. 2159 (1995) (Stevens, J.); Shalala v. Guernsey Mem'l Hosp., 115 S. Ct. 1232 (1995) (Kennedy, J.).

36. Rosenberger v. Rector & Visitors of Univ. of Va., 115 S. Ct. 2510 (1995) (Kennedy, J.); Miller v. Johnson, 115 S. Ct. 2475 (1995) (Kennedy, J.); Sandin v. Conner, 115 S. Ct. 2293 (1995) (Rehnquist, C.J.); Adarand Constructors, Inc. v. Pena, 115 S. Ct. 2097 (1995) (O'Connor, J.); Missouri v. Jenkins, 115 S. Ct. 2038 (1995) (Rehnquist, C.J.); United States v. Lopez, 115 S. Ct. 1624 (1995) (Rehnquist, C.J.). Arguably, this coalition also decided *Duncan v. Henry*, 115 S. Ct. 887 (1995), a *per curiam* decision in which Justices Souter, Ginsburg, and Breyer concurred only in the judgment, *see id.* at 888, and Justice Stevens dissented, *see id.*

37. Florida Bar v. Went For It, Inc., 115 S. Ct. 2371 (1995) (O'Connor, J.).

38. Oklahoma Tax Comm'n v. Chickasaw Nation, 115 S. Ct. 2214 (1995) (Ginsburg, J.).

39. American Airlines, Inc. v. Wolens, 115 S. Ct. 817 (1995) (Ginsburg, J.).

40. Gutierrez de Martinez v. Lamagno, 115 S. Ct. 2227 (1995) (Ginsburg, J., joined by O'Connor, J., in Parts I, II, III, concurring in part and concurring in the judgment.).

41. Kyles v. Whitley, 115 S.Ct. 1555 (1995) (Souter, J.); Schlup v. Delo, 115 S. Ct. 851 (1995) (Stevens, J.).

42. Tome v. United States, 115 S. Ct. 696 (1995) (Kennedy, J., joined by Scalia, J., in Parts I, II-A, II-C, III, concurring in part and concurring in the judgment.).

11. Stevens, Kennedy, Souter, Ginsburg, Breyer[43]

By contrast, October Term 1995 witnessed the formation of just eight distinct five-Justice coalitions. The *Harvard Law Review*'s survey of the 1995 Term identified seven of these coalitions.[44] We added an eighth coalition that emerged in part of a complicated commercial speech case.[45]

TABLE 2.1.2: FIVE-JUSTICE COALITIONS DURING THE 1995 TERM

1. Rehnquist, O'Connor, Scalia, Kennedy, Thomas[46]
2. Rehnquist, O'Connor, Scalia, Souter, Thomas[47]
3. Rehnquist, O'Connor, Scalia, Thomas, Ginsburg[48]
4. Stevens, O'Connor, Kennedy, Souter, Breyer[49]
5. Stevens, O'Connor, Souter, Ginsburg, Breyer[50]
6. Stevens, Scalia, Kennedy, Souter, Ginsburg[51]
7. Stevens, Kennedy, Souter, Ginsburg, Breyer[52]
8. O'Connor, Kennedy, Souter, Ginsburg, Breyer[53]

From these five-Justice coalitions, we derive the following power indexes for the 1994 Term, the 1995 Term, and the two Terms in conjunction. For each Justice in each set of ratings, we compute the number of times that the Justice appeared in a five-Justice coalition, divided by the total number of five-Justice coalitions in the relevant time period, and multiplied by 20 (in order to reflect the assumption

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43. U.S. Term Limits, Inc. v. Thornton, 115 S. Ct. 1842 (1995) (Stevens, J.); United States v. National Treasury Employees Union, 115 S. Ct. 1003 (1995) (Stevens, J.); Hess v. Port Auth. Trans-Hudson Corp., 115 S. Ct. 394 (1994) (Ginsburg, J.).

44. *See 1995 Harvard Survey, supra* note 27, at 370.

45. *See* 44 Liquormart, Inc. v. Rhode Island, 116 S. Ct. 1495, 1515 (1996) (Stevens, J., writing for himself and Scalia, Kennedy, Souter, and Ginsburg, JJ., in part VIII of his opinion).

46. Gray v. Netherland, 116 S. Ct. 2074 (1996) (Rehnquist, C.J.); Leavitt v. Jane L., 116 S. Ct. 2068 (1996) (per curiam); Shaw v. Hunt, 116 S. Ct. 1894 (1996) (Rehnquist, C.J.); Bowersox v. Williams, 116 S. Ct. 1312 (1996) (per curiam); Seminole Tribe v. Florida, 116 S. Ct. 1114 (1996) (Rehnquist, C.J.); Wood v. Bartholomew, 116 S. Ct. 7 (1995) (per curiam); Netherland v. Tuggle, 116 S. Ct. 4 (1995) (per curiam); *see also* Lewis v. Casey, 116 S. Ct. 2174, 2178-84 (1996) (Scalia, J., writing for himself, Rehnquist, C.J., and O'Connor, Kennedy, and Thomas, JJ., in part II of his opinion).

47. Lewis v. United States, 116 S. Ct. 2163 (1996) (O'Connor, J.).

48. Bennis v. Michigan, 116 S. Ct. 994 (1996) (Rehnquist, C.J.).

49. BMW of N. Am., Inc. v. Gore, 116 S. Ct. 1589 (1996) (Stevens, J.).

50. Lonchar v. Thomas, 116 S. Ct. 1293 (1996) (Breyer, J.).

51. 44 Liquormart, Inc. v. Rhode Island, 116 S. Ct. 1495, 1515 (1996) (Stevens, J., writing for himself and Scalia, Kennedy, Souter, and Ginsburg, JJ., in part VIII of his opinion).

52. Holly Farms Corp. v. NLRB, 116 S. Ct. 1396 (1996) (Ginsburg, J.); Medtronic, Inc. v. Lohr, 116 S. Ct. 2241 (1996) (Stevens, J., joined by Breyer, J., with respect to Parts I, II, III, V).

53. Gasperini v. Center for Humanities, Inc., 116 S. Ct. 2211 (1996) (Ginsburg, J.).

that each Justice in a five-member coalition wields 20 percent of the Court's power).

TABLE 2.2.1: SUPREME COURT POWER, 1994 TERM

Justice	Power Index	Power Quotient
Rehnquist	12.7	114
Stevens	12.7	114
O'Connor	9.1	82
Scalia	7.3	66
Kennedy	16.4	148
Souter	10.9	98
Thomas	5.5	50
Ginsburg	14.5	131
Breyer	10.9	98

TABLE 2.2.2: SUPREME COURT POWER, 1995 TERM

Justice	Power Index	Power Quotient
Rehnquist	7.5	68
Stevens	10.0	90
O'Connor	15.0	135
Scalia	10.0	90
Kennedy	12.5	113
Souter	15.0	135
Thomas	7.5	68
Ginsburg	12.5	113
Breyer	10.0	90

TABLE 2.2.3: SUPREME COURT POWER, 1994 AND 1995 TERMS

Justice	Power Index	Power Quotient
Rehnquist	12.0	108
Stevens	10.7	96
O'Connor	12.0	108
Scalia	8.0	72
Kennedy	14.7	132
Souter	12.0	108
Thomas	6.7	60
Ginsburg	13.3	120
Breyer	10.7	96

Each power index expresses, in percentage terms, each Justice's share of the Court's total voting power. If the Justices shared power equally, each would have an index of 11.1. The power quotient expresses each Justice's power relative to his or her pro rata share of the Court's voting power. It is computed by multiplying the power index

by nine. A Justice with a power quotient of 100 enjoys exactly the amount of power that he or she should expect to wield.

Our initial, naïve computation suggests that not all of the Justices are equal. To be sure, our crude measure of voting power raises a number of objections. The first is that of sample size. The Court decided only eighty-six cases in the 1994 Term and another eighty-six in the 1995 Term, and relatively few of these cases were decided by five-Justice coalitions. In a Court that hears so few cases and renders even fewer close decisions,[54] any given Term might not be representative of the Justices' long-run workload.

Second, we have assumed that every Justice in a five-Justice coalition is equally likely to defect. This assumption may not hold. Each 5-4 decision embodies a set of legal propositions with which all members of the prevailing five-Justice majority agree and with which the other Justices disagree. For a member of the winning coalition to defect, there must be another set of propositions—whether in this controversy or in another—that distinguishes the defecting Justice from the other four. In short, there must be legal issues on which the defecting Justice demonstrates the degree of ideological independence needed to disagree with the other four Justices in the coalition. Although this hypothetical set of legal propositions may exist in the abstract, a case presenting those propositions might not come before the Court (at least not within the Term in question).

We are assuming, of course, that the Justices vote strictly according to legal principle and do not trade votes as though they were so many horses at a swap meet.[55] The Justices are notorious, however, for switching votes at various points between their post-argument conference and the final publication of their opinions.[56] In

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54. *See* Peter L. Strauss, *One Hundred Fifty Cases Per Year: Some Implications of the Supreme Court's Limited Resources for Judicial Review of Agency Action*, 87 COLUM. L. REV. 1093 (1987). Note that Strauss's rough count of cases heard each year by the Court has fallen more than 40% in less than a decade.

55. *But see* Saul Brenner, Tony Caporale & Harold Winter, *Fluidity and Coalition Sizes on the Supreme Court*, 36 JURIMETRICS J. 245, 253 (1996) ("[A] majority opinion writer might bargain to obtain the votes of the dissenters .... He might, for example, agree to write the opinion in such a way as to please the dissenting justices."); Frank H. Easterbrook, *Ways of Criticizing the Court*, 95 HARV. L. REV. 802, 821-22 (1982) (suggesting that majority rule on the Court may be subverted by Justices who do not vote strictly according to their legal convictions); *cf.* WOODWARD & ARMSTRONG, *supra* note 5, at 192 ("The Chief's Saturday visit to Blackmun, and Blackmun's subsequent withdrawal of the abortion opinion, had spawned vicious rumors among the clerks of vote trading.").

56. *See, e.g.*, Saul Brenner, *Fluidity on the United States Supreme Court: A Reexamination*, 24 AM. J. POL. SCI. 526 (1980); Brenner et al., *supra* note 55; Robert H. Dorff & Saul Brenner,

certain cases, Justices may and probably do submerge their own views in order to create consensus,[57] or at least a working major-ity.[58] Lacking any method for tracing vote-swapping on the contem-porary Court,[59] we will rely exclusively on the final votes recorded in the Court's published opinions.

To account for the possibility that certain groups of Justices are too ideologically incompatible to coalesce, we might credit a Justice with "swing vote" power within a particular five-Justice majority only if the other four Justices in that majority could have formed a coali-tion on their own. In other words, there must have been another opinion during the same Term in which the other four Justices agreed. If those four Justices have agreed in some other case, we may safely conclude that the first Justice had the option to defect, since the other

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Conformity Voting on the United States Supreme Court, 54 J. POL. 762 (1992); Timothy M. Hagle & Harold J. Spaeth, *Voting Fluidity and the Attitudinal Model of Supreme Court Decision Mak-ing,* 44 W. POL. Q. 119 (1991).

57. *See, e.g.,* Turner Broadcasting Sys., Inc. v. FCC, 114 S. Ct. 2445, 2475 (1994) (Stevens, J., concurring in part and concurring in the judgment) (concurring in a "judgment vacating and remanding for further proceedings" despite the Justice's own "view that we should affirm the judgment" because a "vote to affirm" would mean that "no disposition of this appeal would command the support of a majority of the Court"); Brenner et al., *supra* note 55, at 252 (finding that Justices who switch votes gravitate toward majorities, especially unanimous ones, so much so that "52.9% of the justices who began in the minority coalition at the conference vote" and who change their votes "end with a unanimous majority"); Saul Brenner & Robert H. Dorff, *The Attitudinal Model and Fluidity Voting on the United States Supreme Court: A Theoretical Perspec-tive,* 4 J. THEORETICAL POL. 195, 198-200 (1992) (finding that Justices who shift from the minor-ity to the majority usually do so not because they have changed their legal opinion, but because they prefer to create consensus on the Court).

58. *See* Archibald Cox, *The Supreme Court, 1979 Term — Foreword: Freedom of Expres-sion in the Burger Court,* 94 HARV. L. REV. 1, 72-73 (1980) (encouraging this practice, even at the expense of heartfelt legal positions that otherwise would be expressed in dissents and in opinions concurring in the judgment); Henry M. Hart, Jr., *The Supreme Court, 1958 Term — Foreword: The Time Chart of the Justices,* 73 HARV. L. REV. 84 (1959) (same); *cf.* Robert W. Bennett, *A Dissent on Dissent,* 74 JUDICATURE 255 (1991) (criticizing the increasingly fashiona-ble trend of concurring in the judgment as a symptom of a Court more inclined toward needless nitpicking than collegial decisionmaking). On principled voting within the Supreme Court, see generally Lewis A. Kornhauser & Lawrence G. Sager, *Unpacking the Court,* 96 YALE L.J. 82 (1986); Maxwell L. Stearns, *Standing Back from the Forest: Justiciability and Social Choice,* 834 CAL. L. REV. 1309, 1343-44 n.113, 1347-50 (1995).

59. Historians are able to reconstruct voting patterns on Terms long past by compiling docket books, conference lists, case files, bench memos, and conference notes from the publicly released files of deceased Justices. *See generally, e.g.,* JAN PALMER, THE VINSON COURT ERA: THE SUPREME COURT'S CONFERENCE VOTES (1990). No such evidence is available for more recent Terms, beginning with October Term 1992. Justice Thurgood Marshall's papers, however, provide a window on cases as recent as the 1991 Term. *See, e.g.,* WILLIAM N. ESKRIDGE, JR. & PHILIP P. FRICKEY, CASES AND MATERIALS ON LEGISLATION, STATUTES AND THE CREATION OF PUBLIC POLICY 674 & n.1 (2d ed. 1995) (using Justice Marshall's papers to document the deliber-ations underlying McNally v. United States, 483 U.S. 350 (1987)).

four have demonstrated elsewhere that they were capable of forming a coalition.

The problem with this method is again one of small numbers. There were few four-Justice coalitions in the 1994 Term and even fewer in the 1995 Term.[60] This is no accident. If a group of Justices is already in the minority, there is very little incentive for all of them to join a single dissenting opinion. They are likely to fracture into even smaller groups,[61] since there is little to be gained by compromising one's views simply to reach a consensus.[62]

Finally, one might argue that our approach fails to draw a distinction between "important" and "unimportant" cases. In other words, certain Justices may act with greater force in important or hard cases than in cases at large. We find this objection unpersuasive. So far we have focused solely on 5-4 decisions. Ostensibly the *Harvard Law Review*'s practice of tallying each Term's 5-4 decisions rests on the defensible and arguably correct assumption that important cases tend to be more closely contested than do unimportant cases.[63] If anything, our method of evaluating voting power assigns greater weight to the "important" cases, at least to the extent such cases tend to divide the Court. In any event, Part IV of this Article considers individual Justices' voting patterns in putatively important cases.

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60. Ten and seven respectively, to be precise, or one fewer than the number of corresponding five-Justice coalitions in each Term.

61. *See, e.g.*, Seminole Tribe v. Florida, 116 S. Ct. 1114, 1133 (1996) (Stevens, J., dissenting); *id.* at 1145 (Souter, J., joined by Ginsburg & Breyer, JJ., dissenting); Bennis v. Michigan, 116 S. Ct. 994, 1003 (1996) (Stevens, J., joined by Souter & Breyer, JJ., dissenting); *id.* at 1010 (Kennedy, J., dissenting); Schlup v. Delo, 115 S. Ct. 851, 870 (1995) (Rehnquist, C.J., joined by Kennedy & Thomas, JJ., dissenting); *id.* at 874 (Scalia, J., joined by Thomas, J., dissenting); American Airlines, Inc. v. Wolens, 115 S. Ct. 817, 827 (1995) (Stevens, J., concurring in part and dissenting in part); *id.* at 828 (O'Connor, J., joined in part by Thomas, J., concurring in the judgment in part and dissenting in part).

62. *See* Brenner et al., *supra* note 55, at 252-53 (cataloguing institutional reasons that discourage Justices from coalescing toward a losing legal position); *cf.* Ken Kimura, Note, *A Legitimacy Model for the Interpretation of Plurality Decisions*, 77 CORNELL L. REV. 1593, 1593 n.3, 1626-27 (1992) (identifying 103 plurality decisions — that is, cases not decided by a majority of the Court — between October Term 1981 and October Term 1990 inclusive). The resulting average of 10.3 plurality decisions per Term during the 1980s vastly exceeds averages compiled in the past: 8.8 per Term between 1970 and 1980, *see* Note, *Plurality Decisions and Judicial Decisionmaking*, 94 HARV. L. REV. 1127, 1139 (1981); 3.0 between 1956 and 1969, *see* John F. Davis & William L. Reynolds, *Juridical Cripples: Plurality Opinions in the Supreme Court*, 1974 DUKE L.J. 59, 60; and 0.29 between 1801 and 1955, *see* Comment, *Supreme Court No-Clear-Majority Decisions: A Study in Stare Decisis*, 24 U. CHI. L. REV. 99, 99 n.4 (1956).

63. *See* Brenner et al., *supra* note 55, at 253. Like the Brenner trio, "[w]e are not persuaded that any" quantitative measure can precisely "capture th[e] characteristic" of "'case difficulty.'" *Id.* at 253 n.15.

We now confront all of these objections to our simple analysis by employing a more sophisticated game-theoretic approach.

III. FINDING FEASIBILITY: APPLYING COOPERATIVE GAME THEORY

This Part outlines a more sophisticated game-theoretic approach to determining the Justices' relative voting power. As an initial matter, we must overcome two problems. First, we must find a way to extrapolate the theoretical set of all ideologically feasible coalitions from the empirical set of coalitions that occur in a given Term. Second, we must extend established game-theoretic voting indexes to this more general situation.

A. THE FRANK-SHAPLEY INDEX OF SUPREME COURT POWER

Contemporary game-theoretic analysis of voting traces its origins to the Shapley-Shubik index, a formula devised in 1954 to measure the distribution of power in voting institutions.[64] The Shapley-Shubik index contemplates a voting system with *n* voters. For every issue on which the members of a particular institution might vote, one could rank the voters in declining order of the intensity of their support, from rabid advocates to lukewarm allies to unregenerate opponents. In every such ordering of the voters, the person holding the winning vote is the "pivot" (or, in the argot of public choice scholarship, the "median voter" or "median legislator").[65] The Shapley-Shubik index of any given voter's power within the organization is the number of preferential orderings in which that voter is pivotal, divided by *n*!, the total number of such orderings. On the assumption that all preferential orderings are equally likely, a voter's power may be expressed as the probability that he or she will be the pivot.[66]

The Shapley-Shubik index has yielded at least one attempt to analyze Supreme Court voting through the lens of cooperative game theory. Arthur Frank and Lloyd Shapley modeled the Justices' votes

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64. *See* L.S. Shapley & Martin Shubik, *A Method for Evaluating the Distribution of Power in a Committee System*, 48 AM. POL. SCI. REV. 787 (1954).

65. *See* sources cited *supra* note 7.

66. For a more complete explanation of the Shapley-Shubik index and an application of that index to Supreme Court voting, see Paul H. Edelman, *A Note on Voting*, MATH. SOC. SCI (forthcoming 1997). The Shapley-Shubik index is technically more difficult to apply to the Court, but its results are remarkably similar to those we generate through the index we develop in this Article.

during October Term 1977.[67] For its time, this study represented a significant breakthrough. The *Harvard Law Review*'s contemporaneous survey of the Court contained no analysis of pivotal votes.[68] Frank and Shapley considered how each Justice might prove "pivotal" according to three distinct sets of ideological criteria: political preferences in the traditional "liberal/conservative" sense, judicial deference to legislative prerogative, and judicial deference to governmental discretion in technically complex legal settings such as tax disputes.[69] After reducing each of these factors to an individual linear function, Frank and Shapley used the three lines as the axes in a three-dimensional space.[70] Their three-factor analysis was a conscious effort to measure "the distribution of power" in the Court as "a real political institution," based on "prior knowledge of each [Justice's] ideological attitudes or predilections."[71]

Frank and Shapley's analysis yielded the following power index for the Supreme Court's 1977 Term:[72]

TABLE 3.1: THE FRANK-SHAPLEY POWER INDEX, 1977 TERM

Justice	Power Index
Burger	.065
Brennan	.033
Stewart	.157
White	.129
Marshall	.080
Blackmun	.092
Powell	.346
Rehnquist	.051
Stevens	.047

67. *See* ARTHUR Q. FRANK & LLOYD SHAPLEY, THE DISTRIBUTION OF POWER IN THE U.S. SUPREME COURT (A RAND Note, N-1735-NSF, RAND Corp. 1981).

68. *See The Supreme Court, 1977 Term*, 92 HARV. L. REV. 57, 327-39 (1978).

69. *See* FRANK & SHAPLEY, *supra* note 67, at 10-11.

70. In formal terms, Frank and Shapley's geometric approach used a principal factor analysis that assigned positions to each of the Justices in 3-space. Each linear functional on 3-space gave rise to a linear ordering of the Justices. The authors then assigned a value of 1 to the fifth Justice in that order and 0 to all of the rest. Finally, they identified each linear functional with a point on the 2-sphere and integrated over the sphere using the uniform probability distribution. *See id.*

71. *See id.* at 1.

72. Frank and Shapley actually performed two different computations, based on two different transformations of their data. Table 3.1, shown here, corresponds to Frank and Shapley's Transformation 1. *See id.* at 23. The results are very similar for Transformation 2. *See id.*

The Frank-Shapley power index may be compared directly with ours if one multiplies the Frank-Shapley index by 100. Thus, Lewis Powell boasted a voting index of 34.6 during the 1977 Term (more than three times his pro rata share of the entire Court's voting power), whereas William Brennan compiled a measly power index of 3.3 (less than a third of his expected share).

The most startling aspect of the Frank-Shapley index is that Justice Powell was allocated over one-third of the entire Court's power. This is difficult to believe.. It is particularly difficult to believe that Justice Powell had roughly six times the power of the Chief Justice and nine times the power of William Brennan, the master strategist of the Burger Court. Even a simple review of the decisions from October Term 1977 casts doubt on the vast power disparities reflected in the Frank-Shapley index. For instance, Powell appeared in the majority 132 times while Burger appeared in the majority 126 times. When one considers only five-Justice majorities, Powell appeared in twenty-one and Burger in nineteen. These disparities dwindle further when one considers only cases in which every Justice participated. For Powell, the numbers change to ninety-one and thirteen; for Burger, they become eighty-seven and thirteen. These relatively close numbers undermine the credibility of the Frank-Shapley index.[73]

One weakness of the Frank-Shapley index may be traced to its reliance on subjective judgments of the Justices' ideologies and of the

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73.   An application of our generalized Banzhaf index, which we describe in the next section of this Article, to the 1977 Term yields figures in a tight band between 10.0 and 12.0 percent of the Court's total voting power:

Burger	12.0
Brennan	11.2
Stewart	12.0
White	11.0
Marshall	11.2
Blackmun	11.6
Powell	11.2
Rehnquist	10.2
Stevens	10.0

Because of an extraordinary number of recusals in the 1977 Term, we used only those cases in which every Justice participated. The noticeably narrower range of the power index in the 1977 Term may be attributable to the confluence of two factors. First, the Court's vastly larger docket in that Term created opportunities for substantive disagreement in a larger number of cases. This may have had the effect of moving the set of feasible coalitions toward the set of all possible coalitions. Second, the contemporary Court's trend toward special concurrences and separate dissents tends to atomize the Justices, see supra note 62, which in turn tends to create disparities in voting power.

political implications of particular case outcomes. Studies that at-
tempt to distinguish between "conservative" and "liberal" legal posi-
tions typically concede that these classifications may not "reflect
reality"—that it is emphatically the province and duty of "legal phi-
losophers and other pundits to debate which is the truly conservative
or liberal position."[74] Frank and Shapley compounded this problem
by using not one, but three, separate ideological scales in their study.
Moreover, the calibration of these ideological scales may have been
skewed by the coincidental emergence of certain high-profile legal dis-
putes during the 1977 Term, especially *Regents of the University of
California v. Bakke*.[75]

Another weakness of the Frank-Shapley index is that it treats Jus-
tices who concur in a judgment the same way that it treats Justices
who concur in an opinion. While this methodology does shed light on
a Justice's power to influence the disposition of a particular case, it
misstates the Justice's role in shaping the collective legal reasoning of
the Court. The latter question is far more interesting.[76] Moreover,
positive law arguably *requires* distinctions among Justices who do not
concur in the same opinion.[77] The *Harvard Law Review*'s annual sur-
vey of the Supreme Court reflects this understanding by declining to

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74. Wilkins et al., *supra* note 28, at 39; *cf.* Marbury v. Madison, 5 U.S. (1 Cranch) 137, 177
(1803).

75. 438 U.S. 265 (1978); *see* FRANK & SHAPLEY, *supra* note 67, at 9 n.* (describing *Bakke*
as "the most publicized case of the term").

76. For proof, one need look no further than the cornucopia of scholarship on the relative
virtues of "issue voting" and "outcome voting" — that is, voting issue-by-issue versus voting to
affirm or to reverse. *Compare, e.g.*, Lewis A. Kornhauser & Lawrence G. Sager, *The One and
the Many: Adjudication in Collegial Courts*, 81 CAL. L. REV. 1 (1993) (advocating issue voting)
and David Post & Steven C. Salop, *Rowing Against the Tidewater: A Theory of Voting by Multi-
judge Panels*, 80 GEO. L.J. 743 (1992) (same) *with* John M. Rogers, *"I Vote This Way Because I'm
Wrong": The Supreme Court Justice as Epimenides*, 79 KY. L.J. 439 (1990-91) (casting doubt on
claims made by the supporters of issue voting) *and* John M. Rogers, *"Issue Voting" by Multi-
member Appellate Courts — A Response to Some Radical Proposals*, 49 VAND. L. REV. 997
(1996) (same) *and* Maxwell L. Stearns, *How Outcome Voting Promotes Principled Issue Identifi-
cation: A Reply to Professor John Rogers and Others*, 49 VAND. L. REV. 1045 (1996) (same).

77. *See* Marks v. United States, 430 U.S. 188, 193 (1977) ("When a fragmented Court de-
cides a case and no single rationale explaining the result enjoys the assent of five Justices, 'the
holding of the Court may be viewed as that position taken by those Members who concurred in
the judgments on the narrowest grounds . . . .'" (quoting Gregg v. Georgia, 428 U.S. 153, 169 n.15
(1976) (opinion of Stewart, Powell & Stevens, JJ.))); *cf.* Michael H. v. Gerald D., 491 U.S. 110,
136 (1989) (Brennan, J., dissenting) ("In a case that has yielded so many opinions as has this one,
it is fruitful to begin by emphasizing the common ground shared by a majority of this Court.").
But cf. Nichols v. United States, 114 S. Ct. 1921, 1927 (1994) (noting that the "degree of confu-
sion following a splintered [Supreme Court] decision . . . is itself a reason for reexamining that
decision").

"treat two Justices as having agreed if they did not join the same opin-
ion, even if they agreed in the result of the case and wrote separate
opinions revealing very little philosophical disagreement."[78] The
Frank-Shapley index simply fails to account for the increasing preva-
lence and legal significance of plurality opinions, opinions concurring
solely in the judgment, and dissenting opinions.[79]

For these reasons, we regard the Frank-Shapley index as an un-
satisfactory solution to the conundrum of Supreme Court voting
power. We now present our alternative, based on a modification of
the more naïve index we presented in Part II of this Article.

B.   A DIFFERENT COOPERATIVE GAME THEORY APPROACH

We begin where the Frank-Shapley power index fails: We will
eschew the irreducibly subjective project of assessing the Justices' ide-
ological proclivities or the ideological implications of case outcomes.
(To name but three especially vexing examples, we defy anyone to
distinguish the "liberal" from the "conservative" positions on the
constitutionality of punitive damages,[80] the retroactivity of court judg-
ments,[81] and the dormant commerce clause.[82]) To be sure, ideological
incompatibility is probably the factor that keeps certain coalitions of
Justices from forming. Rather than attempting the hopeless task of
identifying the amorphous ideological fissures that divide the Justices,
however, we will rely on the record of interaction among the Justices.

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78.   *1994 Harvard Survey, supra* note 27, at 342 n.f.; *1995 Harvard Survey, supra* note 27, at
369 n.f.

79.   *See generally* sources cited *supra* note 62. One final source of weakness lies in the
Frank-Shapley index's definition of a pivotal vote. Frank and Shapley restrict themselves to
pivots arising from linear functionals. Using the same coordinatization of Justices in three-di-
mensional space, one can derive a voting index that uses a different geometric description of the
pivotal vote. The resulting index gives values very similar to those generated by the method
described in the next section of this Article.

80.   *See, e.g.,* BMW of N. Am., Inc. v. Gore, 116 S. Ct. 1589 (1996); TXO Prod. Corp. v.
Alliance Resources Corp., 509 U.S. 443 (1993); Pacific Mut. Life Ins. Co. v. Haslip, 499 U.S. 1
(1991); Browning-Ferris Indus., Inc. v. Kelco Disposal, Inc., 492 U.S. 257 (1989).

81.   *See, e.g.,* Reich v. Collins, 513 U.S. 106 (1994); Harper v. Virginia Dep't of Taxation,
509 U.S. 86 (1993); James B. Beam Distilling Co. v. Georgia, 501 U.S. 529 (1991); American
Trucking Ass'ns, Inc. v. Smith, 496 U.S. 167 (1990).

82.   *See, e.g.,* Oklahoma Tax Comm'n v. Jefferson Lines, Inc., 514 U.S. 175 (1995); West
Lynn Creamery, Inc. v. Healy, 512 U.S. 186 (1994); C&A Carbone, Inc. v. Town of Clarkstown,
511 U.S. 383 (1994); Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Resources,
504 U.S. 353 (1992).

The model we develop here is a generalized version of an index developed by John H. Banzhaf III to analyze weighted voting systems.[83] Banzhaf's application of his own index to multimember electoral districts has haunted the Supreme Court's voting rights cases for three decades.[84] Like the Shapley-Shubik index, the Banzhaf index "hypothesizes that the true test of voting power is the ability to cast a tie-breaking, or 'critical' vote."[85] In a spirit of cross-disciplinary cooperation between law and mathematics,[86] we will adopt the Supreme Court's own explanation of the Banzhaf index:

> In a population of *n* voters, where each voter has a choice between two alternatives (candidates), there are 2n possible voting combinations. For example, with a population of three voters, A, B, and C, and two candidates, X and Y, there are eight combinations:

	A	*B*	*C*
#1.	X	X	X
#2.	X	X	Y
#3.	X	Y	X
#4.	X	Y	Y
#5.	Y	X	X
#6.	Y	X	Y
#7.	Y	Y	X
#8.	Y	Y	Y

> .... In th[is] population of three voters ..., any voter can cast a critical vote in four situations; in the other four situations, the vote is not critical since it cannot change the outcome of the election. For example, C can cast a tie-breaking vote only in situations 3, 4, 5, and 6. The number of combinations in which a voter can cast a tie-breaking vote is

83. *See* John F. Banzhaf III, *Weighted Voting Doesn't Work: A Mathematical Analysis*, 19 RUTGERS L. REV. 317 (1965).

84. *See* John F. Banzhaf III, *Multi-Member Electoral Districts — Do They Violate the "One Man, One Vote" Principle,* 75 YALE L.J. 1309 (1966), *cited in* Holder v. Hall, 114 S. Ct. 2581, 2608 n.23 (1994) (Thomas, J., concurring in the judgment); Whitcomb v. Chavis, 403 U.S. 124, 145-46 n.23 (1971); *id.* at 168-70 (separate opinion of Harlan, J.); Kilgarlin v. Hill, 386 U.S. 120, 125 n.3 (1967) *(per curiam)*; *see also* Board of Estimate v. Morris, 489 U.S. 688, 697-99 (1989) (rejecting the "Banzhaf Index" as applied to a borough-by-borough voting scheme within New York City's municipal government); *id.* at 704 (Blackmun, J., concurring in part and concurring in the judgment) ("I ... suspect the Court is correct in rejecting the Banzhaf index ....").

85. *Whitcomb*, 403 U.S. at 145 n.23 (quoting Banzhaf, *supra* note 84).

86. One of us is a mathematics professor; the other, a former literature and linguistics major who truncated his formal mathematics training at differential equations and managed to serve a nine-year sentence in postsecondary education without taking statistics, econometrics, or any other form of applied mathematics. Some accommodation had to be made.

$$2 \cdot \frac{(n-1)!}{\frac{n-1}{2}! \cdot \frac{n-1}{2}!}$$

where n is the number of voters. Dividing this result (critical votes) by 2^n (possible combinations), one arrives at that fraction of possible combinations in which a voter can cast a critical vote. This is the [Banzhaf] theory's measure of voting power.[87]

The generalized Banzhaf index that we use here is merely an expanded version of the index we developed in Part II. The actual voting record in any given Supreme Court Term allows us to define the larger (and more analytically useful) set of all *feasible coalitions*. We define a feasible coalition as a coalition of only those Justices who agree to a particular legal proposition. In other words, the members of any feasible coalition will agree to the legal proposition that defines the coalition, *to the complete exclusion of the other Justices*. In mathematical terms, the set of feasible coalitions can be expressed as the intersection of any collection of actual coalitions, that is, subsets of Justices (of any size) who concurred in an opinion (majority or otherwise) during a Term.[88] For the nonmathematician, this instruction simply means that one should look for the Justices common to all of the coalitions.

For example, during October Term 1994, there were three opinions joined by Justices Stevens, Kennedy, Souter, Ginsburg, and Breyer[89] and two other opinions joined by Justices Stevens, O'Connor, Souter, Ginsburg, and Breyer.[90] The intersection of these two coalitions is the set of Justices who joined all five of these opinions, that is, Justices Stevens, Souter, Ginsburg, and Breyer. These four, standing alone, form a feasible coalition. Based on their behavior in these cases, we may infer that there is some legal proposition on which these four Justices *and only these four* would agree.

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87. *Whitcomb*, 403 U.S. at 145 n.23 (quoting Banzhaf, *supra* note 84).

88. To see that this mathematical definition is the same as the intuitive one, identify each coalition with the set of propositions with which its members agree but those outside the coalition disagree. Then the Justices who agree with the union of the set of propositions will be those in the intersection of the coalitions.

89. U.S. Term Limits, Inc. v. Thornton, 115 S. Ct. 1842 (1995) (Stevens, J.); United States v. National Treasury Employees Union, 115 S. Ct. 1003 (1995) (Stevens, J.); Hess v. Port Auth. Trans-Hudson Corp., 115 S. Ct. 394 (1994) (Ginsburg, J.).

90. Kyles v. Whitley, 115 S. Ct. 1555 (1995) (Souter, J.); Schlup v. Delo, 115 S. Ct. 851 (1995) (Stevens, J.).

If all coalitions of Justices were feasible, there would be 512 such coalitions. (Since there are nine Justices, the total number of different coalitions of Justices is 2^9, or 512. Note that we adopt the mathematically convenient, albeit legally nonsensical, convention that the empty coalition is possible.) During the 1994 Term, we found exactly 308 of the possible collections to be feasible.[91] Only 228 coalitions out of 512 were feasible during the 1995 Term. Taking the two Terms together, we discovered 398 feasible coalitions. The set of feasible coalitions is therefore far more limited than the set of all coalitions. By the same token, the number of feasible coalitions is greater than the number of actual coalitions. During the 1994 Term, only 74 actual coalitions of Justices emerged, ranging from single dissents to the grand coalition of all Justices in a unanimous Court. Exactly the same number of actual coalitions appeared during the 1995 Term, and the two Terms together witnessed a total of 108 actual coalitions.

We can now apply the voting index that we developed in Part II of this Article to the set of feasible coalitions. For each Justice, we count the number of times that (1) the Justice appears in a five-Justice feasible coalition, *and* (2) the coalition obtained by removing that Justice is a feasible coalition as well. The first inquiry determines the maximum number of times that the Justice in question might have cast the pivotal vote in a five-Justice feasible coalition. The second inquiry is designed to eliminate situations in which this Justice could *not* have cast the pivotal vote. If the four Justices left by our hypothetical Justice's defection do not themselves form a feasible coalition, this is a reliable signal that the would-be defector is too ideologically bound to the other four. A threat by this Justice to defect would not be credible because she has not demonstrated sufficient ideological independence to abandon the rest of the coalition. We then normalize these numbers so that each Justice is accorded a percentage weight. So adjusted, these weights add up to 100 percent.

In Tables 3.2.1, 3.2.2, and 3.2.3 below, we summarize the results of this calculation:

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91. *See infra* p.103-111 (app.).

TABLE 3.2.1: ANOTHER LOOK AT SUPREME COURT POWER, 1994 TERM

Justice	Power Index	Power Quotient
Rehnquist	10.2	92
Stevens	9.4	85
O'Connor	8.3	75
Scalia	12.4	112
Kennedy	14.3	129
Souter	10.9	98
Thomas	8.6	77
Ginsburg	13.2	119
Breyer	12.8	115

TABLE 3.2.2: ANOTHER LOOK AT SUPREME COURT POWER, 1995 TERM

Justice	Power Index	Power Quotient
Rehnquist	12.0	108
Stevens	7.4	67
O'Connor	13.1	118
Scalia	11.4	103
Kennedy	12.6	114
Souter	9.7	87
Thomas	10.9	98
Ginsburg	14.9	134
Breyer	8.0	72

TABLE 3.2.3: SUPREME COURT POWER, 1994 AND 1995 TERMS

Justice	Power Index	Power Quotient
Rehnquist	11.5	104
Stevens	9.4	85
O'Connor	10.1	91
Scalia	10.1	91
Kennedy	12.7	114
Souter	11.7	106
Thomas	10.6	95
Ginsburg	12.9	116
Breyer	11.0	99

The computation underlying this modified index is exactly the same as the one we described in Part II of this Article. The difference is that

the larger set of feasible five- and four-Justice coalitions, as interpolated from the more limited set of actual coalitions, gives us a larger sample size and helps us circumvent the problem of small numbers. As applied to the 1977 Term, our modified index generates power ratings ranging between 10.0 and 12.0,[92] a far narrower spread than the huge variations generated by the Frank-Shapley index.

C. A Tour of the Indexes

The differences between our naïve analysis of five-Justice majorities and our more sophisticated analysis of all feasible coalitions deserve especially close attention. Moving from the naïve index to a generalized Banzhaf index changes the power ratings in two significant ways. First, the larger data set underlying the generalized Banzhaf index systematically favors Justices who, on balance, vote more often than their colleagues with the Court majority. Because the set of feasible coalitions is derived from the intersection of all actual coalitions that develop over the course of a Term, Justices who appear disproportionately in majority coalitions are likely to appear in a greater number of feasible five-Justice coalitions. By definition, dissenting or concurring solely in the judgment evinces a failure either to build or to join a winning coalition.

A second, albeit closely related, phenomenon may explain the differences between the naïve and the sophisticated power ratings. Certain Justices may find a relatively greater number of opportunities to defect from otherwise winning coalitions. Such a Justice may be said to be more ideologically supple than his colleagues. In other words, he makes more distinctions among legal propositions and thus can dissociate and realign himself with a greater range of stable coalitions. The Court's likeliest tiebreakers are therefore those Justices who, first, are close enough to the ideological center of gravity on a variety of legal issues to find themselves in a greater number of majority coalitions and, second, are sufficiently flexible to abandon a broad range of coalitions.

Our ratings of Justices Stevens and Kennedy for the 1994 Term illustrate these effects. In our naïve index for the 1994 Term, both Justices held a disproportionately greater share of the Court's total voting power. Justice Kennedy's edge over Justice Stevens was a relatively narrow 3.7 percentage points, 16.4 to 12.7. According to the

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92. *See supra* note 73.

generalized Banzhaf index, however, Justice Stevens held a dispropor-
tionately *low* share of the Court's power for that Term; he held a
power quotient of merely 85. In addition, Justice Kennedy's edge
over Justice Stevens ballooned to nearly five percentage points
(14.3% versus 9.4%). Justice Kennedy's superior performance in the
sophisticated index for the 1994 Term can be attributed to his remark-
able record of voting with the majority. In that Term's eighty-six fully
reasoned decisions, Justice Kennedy dissented only six times.[93] By
contrast, Justice Stevens dissented twenty-six times, four times more
often than Justice Kennedy.[94] A Justice who dissents in more than a
quarter of a Term's cases is either too quirky or too far from the
Court's ideological center of gravity to cast a large number of pivotal
votes.

We believe that the more sophisticated index outperforms the na-
ïve index in measuring the Court's true "coalitional deep structure."
The relatively limited number of actual five-Justice coalitions in any
Term understates the full range of coalition-building possibilities
within the Court. By contrast, the extrapolation underlying the so-
phisticated index's data set helps identify which of the Justices who
appear most often in winning coalitions are the truly pivotal voters.

IV. THE POWER PAGEANT OF THE JUSTICES

A. THERE HE IS: THE MOST DANGEROUS JUSTICE

We are now prepared to nominate the finalists for the title of
Most Dangerous Justice. We begin with October Term 1994. Four
Justices—Scalia, Kennedy, Ginsburg, and Breyer—carried more than
their pro rata share of the Court's collective power. With ratings clus-
tered between 12.4 and 14.3, however, we hesitate to name that
Term's Most Dangerous Justice without taking the analysis somewhat
beyond the numbers. In Supreme Court surveys as in university ad-
missions, the indeterminacy of raw test scores justifies a consideration
of certain "plus factors."[95]

First, we may count the number of cases decided by particular
coalitions. The more cases that a working majority of five Justices
decides, the more likely that this very coalition will be perceived as a

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93. *See 1994 Harvard Survey, supra* note 27, at 340.
94. *See id.*
95. *Cf.* Regents of the Univ. of Cal. v. Bakke, 438 U.S. 265, 317-18 (1978) (opinion of
Powell, J.); Hopwood v. Texas, 78 F.3d 932 *passim* (5th Cir.), *cert. denied,* 116 S. Ct. 2581 (1996).

dominant force within a particular Court. Previously we declined to consider this factor as a component of our generalized Banzhaf index. Our index, after all, seeks to determine the Court's "coalitional deep structure"—that is, the full range of feasible coalitions among each particular group of nine Justices—not the relative stability or political significance of particular coalitions. We are using a "limited set of decided cases" to identify the current Justices' *competence*, or organic capacity, to form coalitions, without regard to the concrete political consequences of such coalition-building during any given Term.[96] Factors measuring actual political *performance*, however, rank high in any pragmatic assessment of the Court.

In the 1994 Term, the "conservative" coalition of Chief Justice Rehnquist and Associate Justices O'Connor, Scalia, Kennedy, and Thomas rendered no fewer than six 5-4 decisions,[97] including high-profile, controversial decisions on religious liberty, congressional redistricting, prisoners' rights, affirmative action, school desegregation, and federalism. Two different "liberal" coalitions—both comprising the four Justices excluded from the "conservative" bloc, plus either Justice O'Connor or Justice Kennedy—delivered a total of five decisions.[98] All but one of the other five-Justice coalitions rendered a single decision.

By this measure, Justice Kennedy trounced the other finalists for the title of Most Dangerous Justice. During the 1994 Term, he participated in seventeen five-Justice majorities. Justice Ginsburg joined five-Justice coalitions in thirteen separate cases, while Justices Scalia and Breyer each took part in nine such coalitions.

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96. Jim Chen, *Law as a Species of Language Acquisition*, 73 WASH. U. L.Q. 1263, 1306 (1995); cf. NOAM CHOMSKY, ASPECTS OF THE THEORY OF SYNTAX 4 (1965) (using a limited number of instances of linguistic *performance*, "the actual use of language in concrete situations," to derive "the underlying system of [grammatical] rules" that defines linguistic *competence*).

97. Rosenberger v. Rectors & Visitors of the Univ. of Va., 115 S. Ct. 2510 (1995) (Kennedy, J.); Miller v. Johnson, 115 S. Ct. 2475 (1995) (Kennedy, J.); Sandin v. Conner, 115 S. Ct. 2293 (1995) (Rehnquist, C.J.); Adarand Constructors, Inc. v. Pena, 115 S. Ct. 2097 (1995) (O'Connor, J.); Missouri v. Jenkins, 115 S. Ct. 2038 (1995) (Rehnquist, C.J.); United States v. Lopez, 115 S. Ct. 1624 (1995) (Rehnquist, C.J.).

98. The coalition of Justices Stevens, O'Connor, Souter, Ginsburg, and Breyer decided *Kyles v. Whitley*, 115 S. Ct. 1555 (1995) (Souter, J.); and *Schlup v. Delo*, 115 S. Ct. 851 (1995) (Stevens, J.). The coalition of Justices Stevens, Kennedy, Souter, Ginsburg, and Breyer decided *U.S. Term Limits, Inc. v. Thornton*, 115 S. Ct. 1842 (1995) (Stevens, J.); *United States v. National Treasury Employees Union*, 115 S. Ct. 1003 (1995) (Stevens, J.); and *Hess v. Port Auth. Trans-Hudson Corp.*, 115 S. Ct. 394 (1994) (Ginsburg, J.).

The putative "importance" of cases decided by particular five-Justice coalitions is another, though less reliable, measure of the politically adjusted voting of individual Justices. The *Harvard Law Review*'s annual survey of Supreme Court decisions provides an informal and unavoidably subjective list of each Term's "greatest hits." Of the twenty-four cases identified in the *Review*'s study of the 1994 Term,[99] thirteen were decided by a one-vote margin. This fifty-four percent ratio vastly exceeded the twenty-two percent ratio of such cases within the Court's entire docket. All six of the decisions rendered by the conservative Rehnquist-O'Connor-Scalia-Kennedy-Thomas bloc merited mention in the Harvard survey.[100] Of the seven other single-vote decisions covered in the Harvard survey, Justice Kennedy voted with the majority five times. In these decisions, Justice Scalia sided with the majority twice. Notably, Justice Kennedy abandoned the conservative bloc in *U.S. Term Limits, Inc. v. Thornton*,[101] rated by Harvard as the Term's most significant decision.[102] Overall, Justice Kennedy voted with the majority in eleven of the thirteen most important single-vote opinions of the 1994 Term. By comparison, Justice Ginsburg voted with the majority in six such cases; Justice Breyer, in seven. Once again, the edge goes to Anthony Kennedy.

The number of 5-4 decisions written by each Justice constitutes an additional plus factor. The power to assign is the power to destroy:[103] Court observers have long recognized that "the power to select the author" of an opinion equals "the power to determine the general direction of the opinion."[104] That power becomes all the more significant when "the reasoning" of an opinion is "as important as [its] finding" of law.[105] The four finalists for the title of the 1994 Term's Most Dangerous Justice are all too junior to manipulate this power by assigning majority opinions to themselves. Collectively they hold 2.7% of the Court's theoretical assigning power and an even slimmer share of the actual power to assign.[106] Justice Kennedy has enough

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99. *See The Supreme Court, 1994 Term*, 109 HARV. L. REV. 10, 12 (1995).

100. *See* cases cited *supra* note 97.

101. 115 S. Ct. 1842 (1995).

102. *See* Kathleen Sullivan, *The Supreme Court, 1994 Term: Comment — Dueling Sovereignties:* U.S. Term Limits, Inc. v. Thornton, 109 HARV. L. REV. 78 (1995). By tradition, a professional author writes the case comment on the Term's most significant decision or group of decisions for Harvard's annual survey.

103. *Cf.* McCulloch v. Maryland, 17 U.S. (4 Wheat.) 316, 431 (1819) ("[T]he power to tax involves the power to destroy . . . .").

104. *See* WOODWARD & ARMSTRONG, *supra* note 5, at 65.

105. *See id.*

106. *See infra* Part V.B, especially Table 5.1.

seniority to assign himself a majority opinion only in the singular in-
stance of a five-Justice coalition consisting of the five most junior Jus-
tices. More likely, when one of these junior Justices receives an
assignment to write a majority opinion, he or she stands near or at the
ideological frontiers of that coalition.[107]

We are mindful of limitations on the usefulness of this factor.
Chief Justices over time have "dramatically over-assign[ed] to those
ideologically closest to them and under-assigned to those furthest
from them."[108] Justice Kennedy's disproportionate share of majority
assignments may be explained in part by his record of aligning himself
with Chief Justice Rehnquist in 83.7% of their common votes during
the 1994 Term—a far higher record than that of any other Associate
Justice.[109] Moreover, the Court's institutional "tendency to give fewer
assignments to newcomers" partly explains the lower number of opin-
ion assignments received by Justices Ginsburg and Breyer.[110] We will
nevertheless treat the number of opinions written for five-Justice ma-
jorities as a modest but meaningful measure of a Justice's voting
power.

During the 1994 Term, Justice Kennedy wrote five opinions for
five-Justice majorities, including three in the *Harvard Law Review*'s
hit parade. These five opinions comprised a full half of his ten princi-
pal opinions during that Term.[111] Justice Ginsburg wrote four opin-
ions for five-Justice majorities, none among Harvard's list of
heavyweights. Those four, however, tied Justice Ginsburg with Justice
Stevens in second place behind Justice Kennedy. The Chief Justice
assigned himself three 5-4 majority opinions during the 1994 Term.[112]
No other Justice wrote more than two opinions in this category. Our
third and fourth finalists fared quite poorly in this test of power. In
his first year on the Court, Justice Breyer wrote no opinion in which
he might have cast the pivotal vote. Neither did the veteran Antonin
Scalia. Edge to Kennedy.

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107. *See* JEFFREY A. SEGAL & HAROLD J. SPAETH, THE SUPREME COURT AND THE ATTITU-
DINAL MODEL 274 (1993) (citing DONALD W. RHODE & HAROLD J. SPAETH, SUPREME COURT
DECISION MAKING ch. 8 (1978) (noting that the marginal Justice in a majority coalition gets a
disproportionately large share of opinion assignments)).

108. *Id.* at 268.

109. *See infra* Table 4.1.

110. SEGAL & SPAETH, *supra* note 107, at 269-70.

111. *See 1994 Harvard Survey, supra* note 27, at 340, 343.

112. *See id.* at 343.

Finally, the Harvard survey provides a way to measure each Justice's "ideological flexibility" independently of the Court's deep coalitional structure. As we mentioned in our discussion of the differences between our naïve and sophisticated indexes, more "ideologically supple" Justices tend to cast pivotal votes because they are more willing to leave coalitions. Harvard's annual tally of the Justices' voting alignments thus reinforces what our index aims to measure: each Justice's ability to form winning coalitions and thereby to cast decisive, lawmaking votes.

TABLE 4.1: VOTING ALIGNMENTS, 1994 TERM[113]

	CJ	JPS	SOC	AS	AMK	DHS	CT	RBG	SGB
CJ	***	50.6	76.7	80.0	83.7	68.6	81.4	67.1	67.1
JPS	50.6	***	55.3	45.2	61.2	69.4	42.4	75.0	70.7
SOC	76.7	55.3	***	68.2	75.6	76.7	67.4	64.7	74.4
AS	80.0	45.2	68.2	***	75.3	60.0	88.2	59.5	59.3
AMK	83.7	61.2	75.6	75.3	***	73.3	73.3	76.5	72.0
DHS	68.6	69.4	76.7	60.0	73.3	***	55.8	80.0	82.9
CT	81.4	42.4	67.4	88.2	73.3	55.8	***	54.1	58.5
RBG	67.1	75.0	64.7	59.5	76.5	80.0	54.1	***	82.7
SGB	67.1	70.7	74.4	59.3	72.0	82.9	58.5	82.7	***
Avg	71.9	58.7	69.9	67.0	73.9	70.8	65.1	70.0	71.0
StD	10.2	11.5	7.0	12.9	5.8	8.8	14.3	9.5	8.7

In Table 4.1, the average of the percentage of "the number of times that one Justice voted with another in full-opinion decisions" measures that Justice's proximity to the Court's ideological center of gravity.[114] A Justice such as Justice Stevens, whose political preferences probably fall well to the left of those of the Court as a whole, will register a lower average (58.7) than will a "median" or "pivotal" Justice. The standard deviation of these percentages measures each Justice's flexibility. The higher the standard deviation, the more violent the disparity in an individual Justice's voting alignments with his or her colleagues. For example, Justice Thomas' standard deviation of 14.3, by far the highest on the Court, is in no small part due to his very high rate of alignment with Justice Scalia (88.2%) and his very low rate of alignment with Justice Stevens (42.4%).

During October Term 1994, Justice Kennedy led the Court in both measures of compatibility. He outranked even the Chief Justice in average collegiality, and the remarkably low standard deviation (5.8) of his alignment rates suggests that he may have been the Court's

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113. This table is derived from *1994 Harvard Survey, supra* note 27, at 341.
114. *Id.*

most ideologically supple Justice. Justices Ginsburg and Breyer fared reasonably well on both measures, but their performances were on par with those by the Chief Justice and by Justices O'Connor and Souter. Not surprisingly, the lowest average rates of alignment and highest standard deviations belonged to the Justices most often believed to define the Court's ideological frontiers: Justices Stevens, Scalia, and Thomas.

One Justice thus has compiled the highest numerical score and completed a clean sweep of all subjective plus factors in our survey of Supreme Court voting power. We believe we have a winner. The envelope please . . . .

The Most Dangerous Justice during October Term 1994 was Anthony M. Kennedy. Ruth Bader Ginsburg and Stephen G. Breyer followed closely on Justice Kennedy's heels. It is not altogether inappropriate to dub them, respectively, the First Runner-Up and Mr. Congeniality. Whether or not Justice Kennedy "knows if [he's] Caesar about to cross the Rubicon, or Captain Queeg cutting [his] own tow line,"[115] he casts the heaviest harpoon—er, vote—among the Justices.

B. I AM WOMAN; HEAR ME ROAR[116]

If 1992 was electoral politics' "year of the woman," October Term 1995 was the Supreme Court's rejoinder. In a Term distinguished by the possible emergence of a new constitutional standard of review in gender discrimination cases,[117] the Court's female Justices dominated our voting power ratings. Justices Ginsburg and O'Connor led the way with 14.9% and 13.1% of the Court's total voting power. Justice Kennedy snuck into the finals with a 12.6 rating, off his torrid 1994 pace but still formidable. At 12.0, Chief Justice Rehnquist made a weak fourth finalist.

Justice O'Connor underwent a remarkable resurrection in the 1995 Term. Her share of the Court's collective voting power rose

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115. Terry Carter, *Crossing the Rubicon*, CAL. LAW., Oct. 1992, at 39, 39-40 (quoting Kennedy on June 29, 1992, the day the Court decided *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833 (1992)).

116. HELEN REDDY, *I Am Woman*, on HELEN REDDY's GREATEST HITS (Capital Records, Inc. 1975) (singing of "[n]umbers too big to ignore").

117. *See* United States v. Virginia, 116 S. Ct. 2264, 2274-76 (1996) (Ginsburg, J.) (describing the "'exceedingly persuasive justification'" needed to overcome the Court's "skeptical scrutiny of official action denying rights or opportunities based on sex").

nearly five percentage points, lifting her from dead last in the generalized Banzhaf index for the 1994 Term to a strong second in the 1995 ratings. One possible, albeit unavoidably subjective, explanation lies in the difference between the dockets in these two Terms. The 1994 Term gave the Court's right wing significant 5-4 victories in "affirmative action, school desegregation, voting rights, religious speech and ... federalism."[118] By contrast, October Term 1995 "was a term with not one theme, but many."[119] The 1995 Term produced an unusually high number of cases in which the Justices could not agree on a coherent legal rationale. Three cases were decided in whole or in part by a vote of 3-2-4,[120] and two cases exhibited 4-1-4 splits.[121] The Court's division in *Colorado Republican Campaign Committee v. FEC* almost defies description; it can most charitably be characterized as a 3-3-1-2 split.[122] Nor was the Court's collective inflexibility limited to isolated episodes. Although the 1995 Term yielded as many fully reasoned opinions as did the 1994 Term (eighty-six in all), the number of *feasible* coalitions declined from 308 to 228. On such a divided Court, one might expect an "accommodationist" such as Justice O'Connor to

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118. Marcia Coyle, *Term Reveals Pragmatic Supreme Court*, NAT'L L.J., July 29, 1996, at C2.

119. Linda Greenhouse, *In Supreme Court's Decisions, A Clear Voice, and a Murmur*, N.Y. TIMES, July 3, 1996, at A1.

120. *See* Bush v. Vera, 116 S. Ct. 1941, 1950 (1996) (plurality opinion of O'Connor, J., joined by Rehnquist, C.J., and Kennedy, J.); *id.* at 1968 (O'Connor, J., concurring); *id.* at 1971 (Kennedy, J., concurring); *id.* at 1972 (Thomas, J., concurring in the judgment, joined by Scalia, J.); *id.* at 1974 (Stevens, J., dissenting, joined by Ginsburg & Breyer, JJ.); *id.* at 1997 (Souter, J., dissenting, joined by Ginsburg & Breyer, JJ.); Morse v. Republican Party, 116 S. Ct. 1186, 1191 (1996) (plurality opinion of Stevens, J., joined by Ginsburg, J.); *id.* at 1213 (Breyer, J., concurring in the judgment, joined by O'Connor & Souter, JJ.); *id.* at 1222 (Thomas, J., dissenting, joined by Rehnquist, C.J., and Scalia, J., and in part by Kennedy, J.); *see also* Denver Area Educ. Telecommuns. Consortium, Inc. v. FCC, 116 S. Ct. 2374, 2394-97 (1996) (plurality opinion of Breyer, J., joined by Stevens & Souter, JJ.) (striking down § 10(c) of the Cable Television Consumer Protection and Competition Act of 1992); *id.* at 2417-19 (Kennedy, J., concurring in part, concurring in the judgment in part, and dissenting in part, joined by Ginsburg, J.) (striking down § 10(c) on a different rationale).

121. *See* Medtronic, Inc. v. Lohr, 116 S. Ct. 2240, 2251-53 (1996) (plurality opinion of Stevens, J., joined by Kennedy, Souter & Ginsburg, JJ.); *id.* at 2259-62 (Breyer, J., concurring in the judgment in relevant part); *id.* at 2262-64 (O'Connor, J., dissenting in relevant part, joined by Rehnquist, C.J., and Scalia & Thomas, JJ.); Montana v. Egelhoff, 116 S. Ct. 2013, 2016 (1996) (plurality opinion of Scalia, J., joined by Rehnquist, C.J., and Kennedy & Thomas, JJ.); *id.* at 2024 (Ginsburg, J., concurring in the judgment); *id.* at 2026 (O'Connor, J., dissenting, joined by Stevens, Souter & Breyer, JJ.).

122. *See* Colorado Republican Campaign Comm. v. FEC, 116 S. Ct. 2309, 2312 (1996) (opinion of Breyer, J., joined by O'Connor & Souter, JJ.); *id.* at 2321 (Kennedy, J., concurring in the judgment and dissenting in part, joined by Rehnquist, C.J., and Scalia, J.); *id.* at 2323 (Thomas, J., concurring in the judgment and dissenting in part, joined in parts I and II by Rehnquist, C.J., and Scalia, J.); *id.* at 2332 (Stevens, J., dissenting, joined by Giusburg, J.).

flourish. At the very least, constrained as the range of coalition-form-
ing opportunities was, October Term 1995 might not have provided
the most ideologically supple Justices a full and fair opportunity to
forge alliances.

The first plus factor that we analyzed for the 1994 Term, the
number of cases decided by particular coalitions, strongly disfavored
Justice Ginsburg vis-à-vis the other power pageant finalists for the
1995 Term. The conservative juggernaut consisting of the Chief Jus-
tice and Justices O'Connor, Scalia, Kennedy, and Thomas assembled
seven 5-4 decisions in the 1995 Term. Only one other five-Justice coa-
lition—that consisting of Justices Stevens, Kennedy, Souter, Ginsburg,
and Breyer—mustered more than a single decision. Justice Ginsburg
joined the winning side in six 5-4 decisions, compared to nine for the
Chief Justice and twelve apiece for Justices O'Connor and Kennedy.
Edge to the moderate Reagan appointees.

Our second "plus" factor, the number of important cases com-
manded by particular five-Justice coalitions, is even murkier. Of the
twenty-five cases deemed by the *Harvard Law Review* to be the most
significant of the 1995 Term,[123] five were decided by a 5-4 margin.[124]
Each of these decisions was rendered by a different five-Justice coali-
tion. Another "big case" named by the *Harvard Law Review* is note-
worthy because the three-Justice plurality that announced the
judgment in that case consisted of the Chief Justice and Justices
O'Connor and Kennedy—three of the four finalists in the 1995 term's
power pageant.[125] In yet another leading case, Justices Kennedy and
Ginsburg formed a bloc of two in a 3-2-4 split.[126] In all, Chief Justice
Rehnquist joined winning five-Justice majorities in two important de-
cisions, while Justices O'Connor and Kennedy each appeared in four
such majorities. Justice Ginsburg boasted three appearances. Advan-
tage, Kennedy, but only by a hair.

Every once in a while, rank does have its privileges. The Chief
Justice dominates the third "plus" factor in this power pageant: the
number of 5-4 decisions written by each finalist. In October Term

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123. *See The Supreme Court, 1995 Term,* 110 HARV. L. REV. 1, 3 (1996).
124. *See* Gasperini v. Center for Humanities, Inc. 116 S. Ct. 2211 (1996); BMW of N. Am.,
Inc. v. Gore, 116 S. Ct. 1589 (1996); 44 Liquormart, Inc. v. Rhode Island, 116 S. Ct. 1495 (1996);
Seminole Tribe v. Florida, 116 S. Ct. 1114 (1996); Bennis v. Michigan, 116 S. Ct. 994 (1996).
125. *See* Bush v. Vera, 116 S. Ct. 1941 (1996).
126. *See* Denver Area Educ. Telecomm. Consortium v. FCC, 116 S. Ct. 2374, 2404 (1996)
(Kennedy, J., joined by Ginsburg, J., concurring in part, concurring in the judgment in part, and
dissenting in part).

1995, Chief Justice Rehnquist wrote four opinions for five-Justice majorities, including powerhouse opinions on the Eleventh Amendment[127] and race-conscious legislative redistricting.[128] Justice O'Connor wrote but one;[129] her power sister, Justice Ginsburg, wrote two.[130] Justice Kennedy, the flagbearer for the conservative coalition during the 1994 Term, wrote no 5-4 opinions in the 1995 Term. Surprisingly, four of the eight decisions rendered by the conservative Rehnquist-O'Connor-Scalia-Kennedy-Thomas coalition took the form of per curiam opinions. Thrice in the 1995 Term this coalition summarily dispensed with death penalty petitions,[131] and thrice the Justices on the other side of the Court's ideological divide objected to the summary disposition of these cases. In this display of voting power, then, Chief Justice Rehnquist outshone his fellow finalists, with honorable mention to Per Curiam, J.

TABLE 4.2: VOTING ALIGNMENTS, 1995 TERM[132]

		CJ	JPS	SOC	AS	AMK	DHS	CT	RGB	SGB
CJ	P	***	49.4	79.7	82.3	78.5	67.1	82.1	65.8	58.2
JPS	P	49.4	***	59.7	45.5	64.9	70.1	44.7	72.7	72.7
SOC	P	79.7	59.7	***	72.2	78.5	78.5	71.8	68.4	74.7
AS	P	82.3	45.5	72.2	***	73.4	60.8	87.2	58.2	54.4
AMK	P	78.5	64.9	78.5	73.4	***	74.7	69.2	75.9	68.4
DHS	P	67.1	70.1	78.5	60.8	74.7	***	57.7	83.5	87.3
CT	P	82.1	44.7	71.8	87.2	69.2	57.7	***	55.1	48.7
RGB	P	65.8	72.7	68.4	58.2	75.9	83.5	55.1	***	74.7
SGB	P	58.2	72.7	74.7	54.4	68.4	87.3	48.7	74.7	***
Avg		70.4	60.0	72.9	66.8	72.9	72.5	64.6	69.3	67.4
SED		11.5	11.2	6.2	13.4	4.7	9.8	14.5	8.8	11.9

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127. *See* Seminole Tribe v. Florida, 116 S. Ct. 1114 (1996). The *Harvard Law Review* rated this decision as the 1995 Term's most significant. *See* Henry Paul Monaghan, *The Supreme Court, 1995 Term—Comment: The Sovereign Immunity "Exception,"* 110 HARV. L. REV. 102 (1996); *cf. supra* note 99.

128. *See* Shaw v. Hunt, 116 S. Ct. 1894 (1996).

129. *See* Lewis v. United States, 116 S. Ct. 2163 (1996).

130. *See* Gasperini v. Center for Humanities, Inc., 116 S. Ct. 224 (1996); Holly Farms Corp. v. NLRB, 116 S. Ct. 1396 (1996).

131. *See* Bowersox v. Williams, 116 S. Ct. 1312 (1996) (per curiam) (vacating a stay of execution); Wood v. Bartholomew, 116 S. Ct. 7 (1995) (per curiam) (summarily vacating a state supreme court's reversal of a capital sentence); Netherland v. Tuggle, 116 S. Ct. 4 (1995) (per curiam) (vacating a stay of execution). The fourth summary disposition rendered by this coalition during the 1995 Term, Leavitt v. Jane L., 116 S. Ct. 2068 (1996) (per curiam), reversed as "plainly wrong" a federal "court of appeals' state-law ruling" on the severability of a partially unconstitutional state statute, *id.* at 2073.

132. This table is derived from *1995 Harvard Survey*, *supra* note 27, at 368.

Our final informal measure of power, the Justices' aggregate rates of alignment with each other, falls far short of delivering a decisive answer. The four power pageant finalists for the 1995 Term were similar in their degree of collegiality, ranking first, second, fourth, and fifth on the Court overall. (Justice Souter finished third.)

The most notable development on alignment rates in the 1995 Term actually involved nonfinalist Justice Breyer. Between the 1994 and 1995 Terms, Justice Breyer's alignment rates dropped from those of a collegial power player to those of an ideological outsider. The standard deviation of his alignment rates in the 1995 Term exceeded Justice Steven's standard deviation, which in the 1994 Term had marked one of that Court's ideological outposts. Not surprisingly, Justice Breyer during the same period fell from being Mr. Congeniality to not even qualifying for the power pageant of the Justices. Indeed, his loss of 4.8 points in his power index between the two Terms was our survey's most dramatic decline in power.

Among our finalists, Justices O'Connor and Kennedy tied for the highest average rate of alignment, but Justice Kennedy reduced the standard deviation of his alignment rates to an astonishing 4.7. (In other words, Justice Kennedy agreed with each of his colleagues almost three-quarters of the time—not much more, not much less.) The Reagan moderates again win a category, although Justice Kennedy probably merits a small nod over Justice O'Connor.

A muddled Term deserves a muddled round of playoffs in the power pageant of the Justices. None of the 1995 Term's finalists emerged a clear winner on the informal measures of voting power. Then again, we can hardly expect a clarion call during a Term that gave us catastrophically confused free speech decisions on commercial speech,[133] campaign finance,[134] and indecent cablecasting.[135] Let confusion reign as it will; numbers have their value. This year's power ratings will stand unadjusted.

Drum roll, please. We are ready to crown the Most Dangerous Justice of October Term 1995. There she is . . . Ruth Bader Ginsburg. Sandra Day O'Connor captures the title of First Runner-Up. Anthony Kennedy, alas, must console himself with the title of Mr. Congeniality.

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133. *See* 44 Liquormart, Inc. v. Rhode Island, 116 S. Ct. 1495 (1996).
134. *See* Colorado Republican Fed. Campaign Comm. v. FEC, 116 S. Ct. 2309 (1996).
135. *See* Denver Area Educ. Telecomms. Consortium,₄Inc. v. FCC, 116 S. Ct. 2374 (1996).

V. POSTSCRIPT: THE POWER *AND* THE GLORY?

A. BLESSED ARE THE SUPPLE IN SPIRIT . . .

Anthony Kennedy convincingly won the title of Most Dangerous Justice during October Term 1994. With comparable force, Ruth Bader Ginsburg swept the 1995 Term's power pageant. These two were the only Justices to wield more than their pro rata share of the Supreme Court's voting power in both the 1994 Term and the 1995 Term. Not surprisingly, Justices Kennedy and Ginsburg led our two-year composite power ratings by a substantial margin.[136] Other power pageant finalists, such as Chief Justice Rehnquist and Justices O'Connor, Scalia, and Breyer, flashed and faded like comets, like long-haired galactic visitors whose moment on the celestial stage retreats as quickly as it comes.[137] By contrast, power that persists "may be compared with the pole-star," the Confucian and constitutional emblem of "government by means of virtue."[138] If there is any fixed star in the constellation of Supreme Court voting, it is that no Justice, high or petty, should be orthodox in politics, nationalism, religion, or other matters of legal opinion.[139]

"This is what this [Article] is about. Power."[140] Our variant of the generalized Banzhaf index measures the propensity of each Justice to vote at the margins of a winning coalition. The most dangerous Justices are those who are most able—and willing—to switch their votes on incremental but decisive legal propositions. What we seek to measure, then, is the marginal propensity to cast the critical vote in contestable and contested disputes over legal reasoning in Supreme Court decisions. The power at the margin is the power to decide. *"Natura non facit saltum,"* intoned Alfred Marshall at the dawn of 20th century economics.[141] So too does law exhibit the marginalist instinct: Like nature, law makes no sudden leaps.

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136. Justices Kennedy and Ginsburg compiled two-year power ratings of 12.7 and 12.9 respectively, with Justice Souter trailing badly in third at 11.7. *See supra* Table 3.2.3.

137. *Cf.* WILLIAM SHAKESPEARE, MACBETH act 5, sc. 5, ll. 25-27 (Eugene M. Waith ed. 1954) ("Life's but a walking shadow, a poor player / That struts and frets his hour upon the stage, / And then is heard no more.").

138. CONFUCIUS, THE ANALECTS § 2.1, at 6 (Raymond Dawson trans., Oxford Univ. Press 1993).

139. *Cf.* West Virginia Bd. of Educ. v. Barnette, 319 U.S. 624, 642 (1943).

140. Morrison v. Olson, 487 U.S. 654, 699 (1988) (Scalia, J., dissenting); *cf.* Seminole Tribe v. Florida, 116 S. Ct. 1114, 1133 (1996) (Stevens, J., dissenting) ("This case is about power . . . .").

141. 1 ALFRED MARSHALL, PRINCIPLES OF ECONOMICS xiii (9th ed. 1961) (1890); *see also* LINNAEUS, PHILOSOPHIA BOTANICA§ 77 (1750).

The marginalist emphasis should make it clear that we are not looking for the "median" Justice. Supreme Court controversies, especially when considered as an organic whole rather than individually, do not readily lend themselves to the preferential orderings that lie at the heart of the Shapley-Shubik index. Indeed, Frank Easterbrook has shown that the presence of stare decisis concerns makes it impossible to describe Supreme Court voting behavior in terms of single-peaked preferences.[142] Maxwell Stearns has brought a similar degree of public choice sophistication to the question of standing.[143] The question of voting power at the margins of complex, multifaceted legal issues is independent of any particular Justice's ideology. We are not asking whether a Justice stands in the Court's ideological mainstream or along the fringes. Rather, we are measuring how smoothly a Justice, regardless of her jurisprudential preferences, forms winning coalitions with her colleagues.

As a practical matter, voting power will fluctuate from Term to Term. Certain salient issues impart a distinct flavor to the Court's docket each Term.[144] There were Terms during the 1980s when takings and civil rights were all the rage. One might describe free speech as the dominant theme of the 1995 Term. If the distribution of issues before the Court differs from Term to Term, so should individual Justices' relative shares of voting power. Different Justices will find themselves in the pivotal position on different issues. Justices Ginsburg and Breyer, for instance, parted ways on far more questions during the 1995 Term than many observers expected, especially on "some critical questions . . . involving business, criminal justice, and First Amendment issues."[145] In the short run, then, a Justice's performance in the Court's power pageant may depend to a substantial extent on the content of the docket.

Over the long haul, of course, the extraordinary diversity of the Court's business erodes the docket's effect on the Justices' voting power. Over the course of several years, a Justice's relative power within the Court will depend heavily on his ability to bend at the frontiers of his jurisprudential preferences. In rough terms, one might say

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142. *See* Easterbrook, *supra* note 55, at 811-31.

143. *See* Stearns, *supra* note 24; Stearns, *supra* note 58.

144. *But see* Stuart Taylor Jr., *Is Judicial Restraint Dead?*, LEGAL TIMES, July 29, 1996, at S25 ("It is a bit artificial to derive a general idea from the jumble of rulings that happen to issue from the Supreme Court in any given term.").

145. *See* Eva M. Rodriguez, *Clinton's Justices: Not a Matched Set*, LEGAL TIMES, July 15, 1996, at 1.

that certain Justices are relatively more committed to a particular view of the law, while others are more open to persuasion. Although two Terms do not permit us to draw firm conclusions, we suspect that Justices Kennedy and Ginsburg will continue to cast a greater share of decisive votes than will Justices Stevens, O'Connor, or Scalia.

B.   . . FOR THEIRS IS THE KINGDOM OF POWER

Whoa. Read that list again. Stevens, yes; Scalia, yes; but O'Connor? Could Sandra Day O'Connor be one of the Supreme Court's weaker Justices? Despite her strong performance in October Term 1995, we have reason to believe that Justice O'Connor is far from being the Most Dangerous Justice. Our study of Supreme Court power contradicts one of the most widespread beliefs about the Court's internal dynamics. Under the more sophisticated generalized Banzhaf index, Justice O'Connor ranked dead last in the 1994 Term's power pageant and tied with Justice Scalia for a distant seventh in the composite ratings. Perhaps Justice O'Connor's relatively poor showing suggests something even deeper about the Court's power structure. Justices Kennedy, Souter, and Ginsburg registered power quotients well above 100 in our two-year composite measure of power, while Justice Breyer is voting right at par power. That alignment of Justices may hold the key to understanding the true meaning of voting power on the Supreme Court.

With the exceptions of Justice Thomas and the Chief Justice,[146] the five most junior Justices cast discernibly heavier votes than their four senior colleagues. Seniority ordinarily has its privileges. So why are the senior members of the Supreme Court casting such weak votes? Perhaps there is a systematic trade-off between voting and other ways to maximize power within the Supreme Court.

The Justices, after all, do more than vote on cases. They also set the Court's decisionmaking agenda.[147] The Chief Justice rules the cert. pool,[148] an administrative device that disposes of four-fifths of the Court's docket in summary fashion.[149] More importantly, the power of assignment follows seniority, trickling down from the Chief

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146. Justice Thomas underperforms slightly, and Chief Justice Rehnquist votes somewhat more heavily than one would expect of the "average" Justice. *See supra* Table 3.2.3.

147. *See generally* H.W. PERRY, JR., DECIDING TO DECIDE: AGENDA SETTING IN THE UNITED STATES SUPREME COURT (1991).

148. *See generally id.* at 41-91.

149. *See* DAVID M. O'BRIEN, STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS 184 (1986).

to the fourth most senior Associate Justice. As we noted above, the power to assign is the power to set the Court's agenda. And that power rests almost exclusively in the four most senior members of the Court.

There are 512 (or 2^9) possible coalitions among Justices, ranging from each of the Justices dissenting alone to the unanimous Court. (We again sacrifice legal coherence for mathematical convenience by including the empty coalition of zero Justices.) Of these, exactly half, or 256, are winning coalitions of five or more Justices. If we assume that all coalitions are feasible, we readily see that opportunities to assign cases rapidly diminish with declining seniority:

TABLE 5.1: THEORETICAL PROBABILITY OF ASSIGNING A
MAJORITY OPINION

Justice	5-4	6-3	7-2	8-1	9-0	Total	%
CJ	70	56	28	8	1	163	63.7
JPS	35	21	7	1	0	64	25.0
SOC	15	6	1	0	0	22	8.6
AS	5	1	0	0	0	6	2.3
AMK	1	0	0	0	0	1	0.4
Total	126	84	36	9	1	256	100.0

Together, the Chief Justice and the senior Associate Justice hold nearly nine-tenths of the Court's theoretical "assigning power."

The significance of opinion assignments cannot be overstated. Once claimed or transferred, the privilege of "[d]rafting a proposed majority opinion gives a Justice well-nigh dictatorial control of a case."[150] Simply being assigned an opinion is no guarantee that the author will not switch his or her vote on the merits of a case.[151] Power

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150. Jim Chen, The Mystery and the Mastery of the Judicial Power, 59 Mo. L. REV. 281, 300 (1994).

151. See SEGAL & SPAETH, supra note 107, at 274-75 (noting that the marginal Justice in a coalition is more likely than any other to receive the opinion assignment, but that the assignment has no impact on the writing Justice's likelihood of defecting); Saul Brenner & Harold J. Spaeth, Majority Opinion Assignments and the Maintenance of the Original Coalition on the Warren Court, 32 AM. J. POL. SCI. 72, 80 (1988) (same). This raises an interesting question: If opinion assignments cannot deter defection, what explains the practice of assigning an opinion to the marginal member of a coalition? Either a desire to avoid having to reassign opinions after defection, see Saul Brenner, Reassigning the Majority Opinion on the United States Supreme Court, 11 JUST. SYS. J. 186, 187 (1986), or a desire to create a temperate opinion that reconciles opposing points of view and is less likely to be overruled by a future Court, see William P. McLauchlan, Ideology and Conflict in Supreme Court Opinion Assignment, 1942-1962, 25 W. POL. Q. 16, 26 (1972).

of this magnitude is surely not dispensed thoughtlessly. The opinion assignment probably represents the single most significant tool for agenda control in the Supreme Court.

In practice, the Chief and the senior Associate Justice hold a virtual monopoly on opinion assignments. Coalitions, as we have seen, are not randomly distributed across a docket. In the 1994 Term, for instance, 32.6% of the Court's cases were unanimous.[152] Chief Justices from Fred Vinson to William Rehnquist have assigned roughly eighty to eighty-five percent of the Court's majority opinions.[153] Strategic behavior, if present, further magnifies the Chief's power. If the Chief Justice switches his vote after the Conference of the Justices in order to regain the privilege of assigning the opinion, as Warren Burger was notorious for doing,[154] the sleight of hand intensifies the Chief's grip on the assignment process.

The structure of the Conference reinforces the Chief Justice and the senior Associate Justices' power over agenda-setting. "Customarily, the Chief Justice frames the discussion of a case with a review of its facts and mention of its history and of relevant legal precedent. In descending order of seniority, the remaining justices present their views."[155] By the time the discussion reaches Justices Thomas, Ginsburg, and Breyer, there is little or no "spin" left to impart.

In short, the more junior Associate Justices have virtually no hope of manipulating the Court's agenda. Potter Stewart, for instance, served on the Court fourteen years before he "found himself the senior member of a majority."[156] (And then he promptly gave the case away.)[157] Justice Kennedy, 1994's Most Dangerous Justice, has a

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152. *See 1994 Harvard Survey, supra* note 27, at 342. There are, to be sure, other factors that push Supreme Court opinions toward unanimity. *See* Brenner et al., *supra* note 55, at 252-53.

153. *See* SEGAL & SPAETH, *supra* note 107, at 262; *see also* PALMER, *supra* note 59, at 125; Sue Davis, *Power on the Court: Chief Justice Rehnquist's Opinion Assignments,* 74 JUDICATURE 66 (1990); Harold J. Spaeth, *Distributive Justice: Majority Opinion Assignments in the Burger Court,* 67 JUDICATURE 299, 301 (1984); S. Sidney Ulmer, *The Use of Power on the Supreme Court: The Opinion Assignments of Earl Warren, 1953-1960,* 19 J. PUB. L. 49, 53 (1970).

154. *See, e.g.,* WOODWARD & ARMSTRONG, *supra* note 5, at 417-22.

155. THE OXFORD COMPANION TO THE SUPREME COURT OF THE UNITED STATES 174 (Kermit L. Hall et al. eds., 1992).

156. *See* WOODWARD & ARMSTRONG, *supra* note 5, at 189.

157. *See* Flood v. Kuhn, 407 U.S. 258 (1972) (Blackmun, J.).

negligible 0.4% theoretical chance of assigning a majority opinion. Indeed, as far as we know, only once has the fourth most senior Associate Justice ever assigned a majority opinion.[158] More junior members of the Court, including reigning power pageant titlist Justice Ginsburg, have no chance whatsoever of assigning a majority opinion.

Viewed in light of the Court's hierarchical structure and the methods for setting the Court's agenda, our analysis of Supreme Court voting suggests that there may be a trade-off between seniority and voting power. Lloyd Shapley of Shapley-Shubik index fame described the motivation of each voter in a collective decisionmaking body as his or her marginal contribution to the building of a successful coalition.[159] Voters with greater agenda-setting power will, a priori, be disinclined to be swing voters. In other words, given a choice in how the legal issues in a case might be framed, why should the Chief Justice present the controversy in a way that risks a losing outcome? Conversely, junior Associate Justices, having little or no agenda-setting power, will find that the route to maximizing their influence on the Court lies in aligning their political preferences with the Court's ideological center of gravity and with developing a supple approach to forming coalitions with their colleagues—precisely the traits that define powerful voting on the Supreme Court. With her accession during the 1994 Term to the third most senior seat on the Court, Justice O'Connor may have moved to a position of maximizing her power on the Court through agenda control rather than through coalition-building. One of the 1995 Term's 5-4 decisions symbolizes this power in particularly vivid terms: In *Gasperini v. Center for Humanities, Inc.*,[160] Justice Ginsburg wrote for a five-Justice coalition led by Justice O'Connor.

So it seems that the junior Justices heave the *U.S.S. High Court*'s heaviest harpoons primarily because they have yet to attain the rank of a Captain Ahab. "[O]nly history can tell" when and how Justice Kennedy discovers whether he is "Caesar at the Rubicon or Queeg cutting [his] own tow line."[161] For her part, Justice Ginsburg has already seized more than her share of the "equal opportunity to aspire,

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158. *See* Williams v. United States, 458 U.S. 279 (1982) (Blackmun, J., joined by Powell, Rehnquist, Stevens & O'Connor, JJ.).

159. *See* LLOYD S. SHAPLEY, A COMPARISON OF POWER INDICES AND A NONSYMMETRIC GENERALIZATION (Rand Corp. Paper No. P-5872, 1977).

160. 116 S. Ct. 2211 (1996) (Ginsburg, J., joined by O'Connor, Kennedy, Souter & Breyer, JJ.).

161. Carter, *supra* note 115, at 39-40 (quoting Kennedy).

achieve, participate in and contribute to" the work of the Court.[162] In the meanwhile, lack of seniority makes powerful voting the only way that Justices Kennedy and Ginsburg can boost their personal power on the Court. The fault, junior Justices, is not in your stars, but in yourselves, that you are underlings.[163] But soft, what power through yonder window breaks? It is the East, and Justice Ginsburg is the sun.[164] And fear not for Justice Kennedy, Justice Ginsburg's once and likely future rival for the title of Most Dangerous Justice. Call him Ishmael:[165] As a perennial contender in the power pageant of the Justices, Justice Kennedy has also mastered the craft of voting with power.

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The ideological battle scars on the Justices' faces leave little doubt that the currency of today's Supreme Court is "power, not reason."[166] Ironically, in the centennial year of William Jennings Bryan's "Cross of Gold" speech,[167] the Court's power flows in two streams of contradictory currency: agenda-setting and voting. No less in the Court's own decisionmaking dynamics than in the political controversies that the Court mediates, "'[t]he tools belong to the [Justice] who can use them.'"[168] Forewarned is forearmed: To the victor belong only those spoils that are cleverly obtained.[169]

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162. United States v. Virginia, 116 S. Ct. 2264, 2275 (1996) (Ginsburg, J.).

163. *Cf.* WILLIAM SHAKESPEARE, JULIUS CÆSAR act 1, sc. 2, ll. 139-40 (Lawrence Mason ed., 1959) ("The fault, dear Brutus, is not in our stars, / But in ourselves, that we are underlings.").

164. *Cf.* WILLIAM SHAKESPEARE, ROMEO AND JULIET act II, sc. i, ll. 47-48 (Richard Hosley ed. 1954) ("But soft, what power through yonder window breaks? It is the East and Juliet is the sun.").

165. *Cf.* HERMAN MELVILLE, MOBY-DICK, OR, THE WHALE 3 (Harrison Hayford et al. eds., 1988) ("Call me Ishmael.").

166. *See* Payne v. Tennessee, 501 U.S. 808, 844 (1991) (Marshall, J., dissenting); *cf.* Suzanna Sherry, *The Sleep of Reason*, 84 GEO. L.J. 453, 481 (1996) ("[I]f reason is not a universal epistemology that can mediate between . . . different beliefs, but only the belief system favored by the powerful, then whoever is in power will reify his own epistemology.").

167. William Jennings Bryan, The Cross of Gold Speech (July 9, 1896), *in* SELECTED AMERICAN SPEECHES ON BASIC ISSUES, 1850-1950, at 182 (Carl G. Brandt & Edward M. Shafter, Jr. eds., 1960).

168. Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579, 654 (1952) (Jackson, J., concurring).

169. *But cf.* Rutan v. Republican Party, 497 U.S. 62, 64 (1990) ("To the victor belong only those spoils that may be constitutionally obtained.").

MATHEMATICAL APPENDIX

In this appendix the mathematical formalism of the voting index is discussed. Let X be the set of Supreme Court Justices. We construct a collection of subsets of X in the following way: for each opinion during the 1994 and 1995 Terms, we look at the set of Justices who joined that opinion. Call this collection of subsets O, the *opinion set*. The opinion set is not a priori closed under intersection, *i.e.*, it may well happen that subsets A and B are both in O while $A \cap B$ is not. Let SC be the collection of subsets obtained by computing all intersections of subsets in O, i.e.,

$$SC = \{A \mid A = O_1 \cap O_2 \cap \bullet \bullet \bullet \cap O_k,\ O_i \ \varepsilon\ O\}.$$

The collection SC is the collection of feasible coalitions defined above.

Let v be the function $v : SC \to \mathbf{R}$ that identifies the winning coalitions. That is

$$v(A) = \begin{cases} 1 \ if \ |A| \geq 5 \\ 0 \ if \ |A| \leq 4 \end{cases}$$

The *generalized Banzhaf index* of each Justice $x \in X$ is calculated by

$$B(\mathrm{x}) = \frac{1}{r} \sum_{A,\ A-x \varepsilon SC} v(A) - v(A-x)$$

$$= \frac{1}{r} \sum_{\{A,\ A-x \varepsilon SC\ |\ |A|=5\}} 1.$$

where r is taken to normalize the sum so that $\sum_{x \varepsilon X} B(\mathrm{x}) = 1$.

We have encoded the data by assigning to each Justice a number according to seniority, i.e., Chief Justice Rehnquist is assigned 1, Justice Stevens is assigned 2, etc. The data for the the 1994 Term are:

$$O94 = \{\{2\},\ \{3\},\ \{4\},\ \{6\},\ \{7\},\ \{8\},\ \{9\},\ \{1,4\},$$
$$\{1,7\},\ \{2,6\},\ \{2,8\},\ \{3,5\},\ \{3,6\},\ \{3,7\},\ \{3,9\},$$
$$\{4,5\},\ \{4,7\},\ \{6,9\},\ \{8,9\},\ \{1,3,6\},\ \{1,4,7\},\ \{1,5,7\},$$
$$\{2,3,6\},\ \{2,7,9\},\ \{2,8,9\},\ \{3,6,9\},\ \{3,8,9\},\ \{4,5,7\},$$
$$\{6,8,9\},\ \{1,3,4,7\},\ \{1,3,7,9\},\ \{1,4,5,7\},\ \{1,4,6,7\},$$
$$\{2,3,6,9\},\ \{2,5,6,8\},\ \{2,5,8,9\},\ \{2,6,8,9\},\ \{3,4,6,7\},$$
$$\{4,7,8,9\},\ \{1,2,3,5,6\},\ \{1,2,5,6,8\},\ \{1,2,5,8,9\},\ \{1,3,4,5,7\},$$
$$\{1,3,4,7,9\},\ \{1,4,5,7,8\},\ \{1,5,6,8,9\},\ \{2,3,5,8,9\},\ \{2,3,6,8,9\},\ \{2,4,5,6,8\},$$

{2,5,6,8,9}, {1,2,3,6,8,9}, {1,2,4,5,7,8}, {1,2,5,6,8,9},

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{1,3,4,5,6,7,8,9}, {1,2,3,4,5,6,7,8,9}}

SC94 = { {}, {1}, {2}, {3}, {4}, {5}, {6}, {7}, {8},

{9}, {1,2}, {1,3}, {1,4}, {1,5}, {1,6}, {1,7},

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{3,9}, {4,5}, {4,6}, {4,7}, {4,8}, {4,9}, {5,6},

{5,7}, {5,8}, {5,9}, {6,7}, {6,8}, {6,9}, {7,8},

{7,9}, {8,9}, {1,2,4}, {1,2,5}, {1,2,6}, {1,2,7},

{1,2,8}, {1,2,9}, {1,3,4}, {1,3,5}, {1,3,6}, {1,3,7},

{1,3,8}, {1,3,9}, {1,4,5}, {1,4,6}, {1,4,7}, {1,4,8},

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{5,8,9}, {6,8,9}, {7,8,9}, {1,2,3,6}, {1,2,4,5},

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{1,2,5,9}, {1,2,6,8}, {1,2,6,9}, {1,2,7,8}, {1,2,8,9},

{1,3,4,5}, {1,3,4,7}, {1,3,4,9}, {1,3,5,6}, {1,3,5,7},

{1,3,5,8}, {1,3,5,9}, {1,3,6,8}, {1,3,6,9}, {1,3,7,9},

{1,3,8,9}, {1,4,5,6}, {1,4,5,7}, {1,4,5,8}, {1,4,5,9},

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{1,4,8,9}, {1,5,6,7}, {1,5,6,8}, {1,5,6,9}, {1,5,7,8},
{1,5,7,9}, {1,5,8,9}, {1,6,7,8}, {1,6,7,9}, {1,6,8,9},
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{2,5,6,9}, {2,5,7,8}, {2,5,7,9}, {2,5,8,9}, {2,6,8,9},
{2,7,8,9}, {3,4,5,6}, {3,4,5,8}, {3,4,5,9}, {3,4,6,7},
{3,4,6,8}, {3,4,6,9}, {3,4,8,9}, {3,5,6,8}, {3,5,6,9},
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{4,5,7,9}, {4,5,8,9}, {4,6,8,9}, {4,7,8,9}, {5,6,8,9},
{5,7,8,9}, {1,2,3,5,6}, {1,2,3,6,9}, {1,2,4,5,7},
{1,2,4,5,8}, {1,2,4,6,9}, {1,2,4,7,8}, {1,2,5,6,8},
{1,2,5,6,9}, {1,2,5,7,8}, {1,2,5,8,9}, {1,2,6,7,9},
{1,2,6,8,9}, {1,3,4,5,6}, {1,3,4,5,7}, {1,3,4,5,8},
{1,3,4,5,9}, {1,3,4,7,9}, {1,3,5,6,7}, {1,3,5,6,8},
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{1,4,6,8,9}, {1,4,7,8,9}, {1,5,6,7,8}, {1,5,6,7,9},
{1,5,6,8,9}, {1,5,7,8,9}, {1,6,7,8,9}, {2,3,4,6,9},
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{2,4,6,8,9}, {2,4,7,8,9}, {2,5,6,8,9}, {2,5,7,8,9},
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{1,2,3,6,8,9}, {1,2,4,5,6,9}, {1,2,4,5,7,8}, {1,2,4,6,7,9},
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{1,4,6,7,8,9}, {1,5,6,7,8,9}, {2,3,4,5,6,9}, {2,3,4,6,8,9},
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{1,2,3,4,5,6,9}, {1,2,3,5,6,7,9}, {1,2,3,5,6,8,9},

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{2,3,4,5,6,8,9}, {1,2,3,4,5,6,7,9}, {1,2,3,4,5,6,8,9},

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{1,2,3,4,5,6,7,8,9}}.

The data for the 1995 Term are:

O95 = {{1}, {2}, {3}, {4}, {5}, {6}, {7}, {8}, {9},

{1,4}, {1,5}, {1,7}, {1,8}, {2,5}, {2,7}, {2,8},

{2,9}, {3,4}, {3,9}, {4,7}, {4,9}, {5,8}, {5,9},

{6,8}, {6,9}, {8,9}, {1,3,5}, {1,3,7}, {1,4,5},

{1,4,7}, {2,5,8}, {2,6,8}, {2,6,9}, {2,8,9}, {3,4,7},

{3,6,9}, {4,5,7}, {6,8,9}, {1,3,4,7}, {1,3,6,9},

{1,4,5,7}, {2,3,6,9}, {2,5,6,8}, {2,5,7,8}, {2,6,8,9},

{1,3,4,5,7}, {1,3,4,6,7}, {1,3,4,7,8}, {2,3,5,6,9},

{2,3,6,8,9}, {2,4,5,6,8}, {2,5,6,8,9}, {3,5,6,8,9},

{1,2,5,6,8,9}, {1,2,3,4,5,7}, {1,3,4,6,7,9}, {1,3,5,6,8,9},

{1,4,5,6,7,8}, {2,3,5,6,8,9}, {2,4,5,6,7,8}, {2,4,5,6,8,9},

{1,2,3,4,5,7,8}, {1,2,3,5,6,7,8}, {1,2,3,5,6,8,9},

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{1,2,3,4,5,6,8,9}, {1,2,3,5,6,7,8,9}, {1,3,4,5,6,7,8,9},

{1,2,3,4,5,6,7,8,9}}

and

SC95={{}, {1}, {2}, {3}, {4}, {5}, {6}, {7}, {8},

{9}, {1,3}, {1,4}, {1,5}, {1,6}, {1,7}, {1,8},

{2,3}, {2,5}, {2,6}, {2,7}, {2,8}, {2,9}, {3,4},

{3,5}, {3,6}, {3,7}, {3,8}, {3,9}, {4,5}, {4,6},

{4,7}, {4,8}, {4,9}, {5,6}, {5,7}, {5,8}, {5,9},

{6,7}, {6,8}, {6,9}, {7,8}, {8,9}, {1,2,5}, {1,3,4},

{1,3,5}, {1,3,6}, {1,3,7}, {1,3,8}, {1,4,5}, {1,4,6},

{1,4,7}, {1,4,8}, {1,5,6}, {1,5,7}, {1,5,8}, {1,6,7},
{1,6,8}, {1,6,9}, {1,7,8}, {2,3,5}, {2,3,6}, {2,3,8},
{2,4,5}, {2,5,6}, {2,5,7}, {2,5,8}, {2,6,8}, {2,6,9},
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{4,7,8}, {5,6,7}, {5,6,8}, {5,6,9}, {5,7,8}, {6,7,8},
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{1,4,5,7}, {1,4,5,8}, {1,4,6,7}, {1,4,6,8}, {1,4,7,8},
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{1,3,4,6,7}, {1,3,4,6,8}, {1,3,4,6,9}, {1,3,4,7,8},
{1,3,5,6,7}, {1,3,5,6,8}, {1,3,5,6,9}, {1,3,5,7,8},
{1,3,6,7,8}, {1,3,6,7,9}, {1,3,6,8,9}, {1,4,5,6,7},
{1,4,5,6,8}, {1,4,5,7,8}, {1,4,6,7,8}, {1,5,6,7,8},
{1,5,6,8,9}, {2,3,4,5,8}, {2,3,5,6,8}, {2,3,5,6,9},
{2,3,5,7,8}, {2,3,6,8,9}, {2,4,5,6,8}, {2,4,5,7,8},
{2,5,6,7,8}, {2,5,6,8,9}, {3,4,5,6,8}, {3,4,5,6,9},
{3,4,6,8,9}, {3,5,6,7,8}, {3,5,6,7,9}, {3,5,6,8,9},
{3,6,7,8,9}, {4,5,6,7,8}, {4,5,6,8,9}, {1,2,3,4,5,7},
{1,2,3,4,5,8}, {1,2,3,5,6,8}, {1,2,3,5,7,8}, {1,2,5,6,8,9},
{1,3,4,5,6,7}, {1,3,4,5,6,8}, {1,3,4,5,6,9}, {1,3,4,5,7,8},
{1,3,4,6,7,8}, {1,3,4,6,7,9}, {1,3,4,6,8,9}, {1,3,5,6,7,8},

{1,3,5,6,7,9}, {1,3,5,6,8,9}, {1,3,6,7,8,9}, {1,4,5,6,7,8},

{2,3,5,6,7,8}, {2,3,5,6,8,9}, {2,4,5,6,7,8}, {2,4,5,6,8,9},

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{1,2,3,5,6,7,8,9}, {1,3,4,5,6,7,8,9}, {1,2,3,4,5,6,7,8,9}}.

For the union of the two Terms

O94-95={{1}, {2}, {3}, {4}, {5}, {6}, {7}, {8}, {9},

{1,4}, {1,5}, {1,7}, {1,8}, {2,5}, {2,6}, {2,7},

{2,8}, {2,9}, {3,4}, {3,5}, {3,6}, {3,7}, {3,9},

{4,5}, {4,7}, {4,9}, {5,8}, {5,9}, {6,8}, {6,9},

{8,9}, {1,3,5}, {1,3,6}, {1,3,7}, {1,4,5}, {1,4,7},

{1,5,7}, {2,3,6}, {2,5,8}, {2,6,8}, {2,6,9}, {2,7,9},

{2,8,9}, {3,4,7}, {3,6,9}, {3,8,9}, {4,5,7}, {6,8,9},

{1,3,4,7}, {1,3,6,9}, {1,3,7,9}, {1,4,5,7}, {1,4,6,7},

{2,3,6,9}, {2,5,6,8}, {2,5,7,8}, {2,5,8,9}, {2,6,8,9},

{3,4,6,7}, {4,7,8,9}, {1,2,3,5,6}, {1,2,5,6,8}, {1,2,5,8,9},

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{1,4,5,7,8}, {1,5,6,7,8}, {2,3,5,6,9}, {2,3,5,8,9},

{2,3,6,8,9}, {2,4,5,6,8}, {2,5,6,8,9}, {3,5,6,8,9},

{1,2,3,4,5,7}, {1,2,3,6,8,9}, {1,2,4,5,7,8}, {1,2,5,6,8,9},

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{1,2,3,4,5,7,8}, {1,2,3,5,6,7,8}, {1,2,3,5,6,8,9},

{1,2,4,6,7,8,9}, {1,3,4,5,6,7,8}, {1,3,4,5,6,7,9},

{1,3,4,5,6,8,9}, {1,3,4,5,7,8,9}, {1,3,4,6,7,8,9},

{2,3,4,5,6,8,9}, {2,3,5,6,7,8,9}, {1,2,3,4,5,6,7,9},

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{1,3,4,5,6,7,8,9}, {1,2,3,4,5,6,7,8,9}}.

and

SC94-95= {{}, {1}, {2}, {3}, {4}, {5}, {6}, {7}, {8},
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   {2,8}, {2,9}, {3,4}, {3,5}, {3,6}, {3,7}, {3,8},
   {3,9}, {4,5}, {4,6}, {4,7}, {4,8}, {4,9}, {5,6},
   {5,7}, {5,8}, {5,9}, {6,7}, {6,8}, {6,9}, {7,8},
   {7,9}, {8,9}, {1,2,3}, {1,2,4}, {1,2,5}, {1,2,6},
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   {3,6,8}, {3,6,9}, {3,7,8}, {3,7,9}, {3,8,9}, {4,5,6},
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   {1,2,4,7}, {1,2,4,8}, {1,2,5,6}, {1,2,5,7}, {1,2,5,8},
   {1,2,5,9}, {1,2,6,7}, {1,2,6,8}, {1,2,6,9}, {1,2,7,8},
   {1,2,8,9}, {1,3,4,5}, {1,3,4,6}, {1,3,4,7}, {1,3,4,8},
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{1,3,5,7,8}, {1,3,5,7,9}, {1,3,5,8,9}, {1,3,6,7,8},
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{3,5,6,7,8}, {3,5,6,7,9}, {3,5,6,8,9}, {3,5,7,8,9},

{3,6,7,8,9}, {4,5,6,7,8}, {4,5,6,8,9}, {4,5,7,8,9},
{5,6,7,8,9}, {1,2,3,4,5,7}, {1,2,3,4,5,8}, {1,2,3,5,6,7},
{1,2,3,5,6,8}, {1,2,3,5,6,9}, {1,2,3,5,7,8}, {1,2,3,6,8,9},
{1,2,4,5,6,9}, {1,2,4,5,7,8}, {1,2,4,6,7,9}, {1,2,4,6,8,9},
{1,2,5,6,7,8}, {1,2,5,6,7,9}, {1,2,5,6,8,9}, {1,2,6,7,8,9},
{1,3,4,5,6,7}, {1,3,4,5,6,8}, {1,3,4,5,6,9}, {1,3,4,5,7,8},
{1,3,4,5,7,9}, {1,3,4,5,8,9}, {1,3,4,6,7,8}, {1,3,4,6,7,9},
{1,3,4,6,8,9}, {1,3,4,7,8,9}, {1,3,5,6,7,8}, {1,3,5,6,7,9},
{1,3,5,6,8,9}, {1,3,5,7,8,9}, {1,3,6,7,8,9}, {1,4,5,6,7,8},
{1,4,5,6,7,9}, {1,4,5,6,8,9}, {1,4,5,7,8,9}, {1,4,6,7,8,9},
{1,5,6,7,8,9}, {2,3,4,5,6,9}, {2,3,4,6,8,9}, {2,3,5,6,7,8},
{2,3,5,6,7,9}, {2,3,5,6,8,9}, {2,4,5,6,7,8}, {2,4,5,6,8,9},
{2,4,5,7,8,9}, {2,5,6,7,8,9}, {3,4,5,6,8,9}, {3,5,6,7,8,9},
{1,2,3,4,5,6,9}, {1,2,3,4,5,7,8}, {1,2,3,5,6,7,8},
{1,2,3,5,6,7,9}, {1,2,3,5,6,8,9}, {1,2,4,5,6,7,9},
{1,2,4,5,6,8,9}, {1,2,4,6,7,8,9}, {1,2,5,6,7,8,9},
{1,3,4,5,6,7,8}, {1,3,4,5,6,7,9}, {1,3,4,5,6,8,9},
{1,3,4,5,7,8,9}, {1,3,4,6,7,8,9}, {1,3,5,6,7,8,9},
{1,4,5,6,7,8,9}, {2,3,4,5,6,8,9}, {2,3,5,6,7,8,9},
{1,2,3,4,5,6,7,9}, {1,2,3,4,5,6,8,9}, {1,2,3,5,6,7,8,9},
{1,2,4,5,6,7,8,9}, {1,3,4,5,6,7,8,9}, {1,2,3,4,5,6,7,8,9}}.

The most computationally difficult part of the foregoing analysis is the production of the feasible set SC from the opinion set O. This was accomplisted through a script written by the first author in *Mathematica*®, a commercially available symbolic manipulation package.