ARTICLE

AN EMPIRICAL ANALYSIS OF THE LENGTH OF U.S. SUPREME COURT OPINIONS

Ryan C. Black^{*} & James F. Spriggs II^{**}

TABLE OF CONTENTS

I.	INT	RODUCTION	622
II.	WH	IY STUDY MAJORITY OPINION LENGTH?	626
III.	LO	NGITUDINAL TRENDS IN MAJORITY	
	OP	INION LENGTH	630
	А.	Data and Methods	630
	В.	Results: Trends Across Time	632
		1. The Quantity and Unanimity of	
		Majority Opinions	632
		2. Majority Opinion Length	634
		3. Majority Opinion Footnote Length	636
	С.	The Impact of Law Clerks on	
		Majority Opinion Length	638
		1. Institutional Usage of Law Clerks,	
		1791–2005	638
		2. Individualized Usage of Law Clerks.	
		1953–1990	
		3. Why Not Law Clerks?	

^{*} Ryan C. Black (rcblack@wustl.edu) is a Graduate Student Associate in the Center for Empirical Research in the Law (CERL) at Washington University School of Law, and a Ph.D. candidate in political science at Washington University in St. Louis.

James F. Spriggs II (jspriggs@artsci.wustl.edu) is Professor of Political Science, Professor of Law (by courtesy), and a Fellow in CERL at Washington University in St. Louis. An earlier version of this project was presented at the 2nd Annual Conference on Empirical Legal Studies on November 9–10, 2007 in New York, N.Y. We thank Christina Boyd, Frank Cross, Barry Friedman, Jeff Gill, Pauline Kim, David Law, Andrew Martin, and Robert Walker for helpful comments and suggestions.

622		HOUSTON LAW REVIEW	[45:3]
	D.	The Court's Institutional Development and the Length of Majority Opinions	645
IV.	$\mathbf{T}\mathbf{H}$	E DETERMINANTS OF CASE-LEVEL MAJORITY OPINION	
	LEI	NGTH	648
	А.	Hypotheses and Measures	652
		1. Collegial Interaction	653
		2. Contextual Influences	656
	В.	Data and Methods	660
	С.	Results	662
		1. Collegial Interaction	662
		2. Contextual Influences.	664
	D.	Discussion	667
V.	$\mathbf{T}\mathbf{H}$	E EFFECT OF MAJORITY OPINION LENGTH	668
	А.	Citation and Treatment of Supreme Court Precedent	
		by Lower Federal Courts	669
	В.	Data, Measures, and Methods	670
		1. Dependent Variables	670
		2. Control Variables	673
	С.	Results	676
	D.	Discussion	681
VI.	Co	NCLUSION	681

I. INTRODUCTION

In recent years the visibility of empirical legal scholarship has increased dramatically. A large—and growing—group of scholars are deploying the tools of social science to better understand how law and legal institutions operate. While the list of important contributions made by this relatively new approach could stretch for pages, recent research has provided fresh and thought provoking answers to questions ranging from the influence of war on the Supreme Court's civil liberties jurisprudence¹ to a far reaching and thorough probing of the determinants of lower federal court decisionmaking²—examining,

^{1.} See, e.g., Lee Epstein et al., The Supreme Court During Crisis: How War Affects Only Non-War Cases, 80 N.Y.U. L. REV. 1, 8–9 (2005) (claiming justices are more likely to curtail civil rights during times of war).

^{2.} See, e.g., FRANK B. CROSS, DECISION MAKING IN THE U.S. COURTS OF APPEALS passim (2007) (using quantitative empirical methods to analyze judicial decisions); CASS R. SUNSTEIN ET AL., ARE JUDGES POLITICAL? AN EMPIRICAL ANALYSIS OF THE FEDERAL JUDICIARY 3 (2006) (examining the connection between judicial decisions and political

2008] SUPREME COURT OPINION LENGTH

among other questions, the extent to which such judges are constrained by higher court rulings or jurisprudential considerations. More generally, this line of research uses empirical evidence to: (1) answer theoretical and descriptive questions about law, and (2) provide an understanding of the normative dimensions of their empirical results.³

In a related vein, empirical scholarship is increasingly interested in gaining a better understanding of both the development and characteristics of law. In the context of the U.S. Supreme Court, this has generally led scholars to analyze measurable features of the U.S. Supreme Court's written opinions as a means of understanding the dynamics of the Court's decisionmaking process. These studies use characteristics of the Court's opinions to fathom a range of diverse topics including the role of jurisprudential considerations,⁴ the Court's

convictions); Frank Cross, Appellate Court Adherence to Precedent, 2 J. EMPIRICAL LEGAL STUD. 369, 403–04 (2005) (arguing there is court adherence to precedent even when those precedents yield ideologically undesirable results for the lower courts); Frank B. Cross & Emerson H. Tiller, Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals, 107 YALE L.J. 2155, 2172 (1998) (suggesting the presence of a judge whose policy preferences differ from the majority is a significant determinant of whether judges will properly perform their role as legal decisionmakers); Jason J. Czarnezki & William K. Ford, The Phantom Philosophy? An Empirical Investigation of Legal Interpretation, 65 MD. L. REV. 841, 860 (2006) (coding judicial opinions to determine the interpretive philosophies of judges); Andrew P. Morriss, Michael Heise & Gregory C. Sisk, Signaling and Precedent in Federal District Court Opinions, 13 SUP. CT. ECON. REV. 63, 64-65 (2005) (analyzing opinions for instances of judicial self-promotion); Gregory C. Sisk, Michael Heise & Andrew P. Morriss, Charting the Influences on the Judicial Mind: An Empirical Study of Judicial Reasoning, 73 N.Y.U. L. REV. 1377, 1382-83, 1410 (1998) (explaining legal reasoning by using statistical analysis of court opinions); see also Pauline T. Kim, Lower Court Discretion, 82 N.Y.U. L. REV. 383, 394, 409-10 (2007) (examining the implications of principle-agent models and discretion on lower court decisionmaking); studies cited infra notes 4-8 (discussing techniques and methodologies used to analyze judicial decisionmaking and drafting of opinions); studies cited infra note 214 (applying theories of judicial decisionmaking to decisions to grant en banc review).

^{3.} For such a claim regarding courts of appeals' decisionmaking, see Tracey E. George, *Developing a Positive Theory of Decisionmaking on U.S. Courts of Appeals*, 58 OHIO ST. L.J. 1635, 1638, 1641–42 (1998). See Lee Epstein, Jack Knight & Andrew D. Martin, *The Norm of Prior Judicial Experience and Its Consequences for Career Diversity on the U.S. Supreme Court*, 91 CAL. L. REV. 903, 908 (2003), for the use of empirical evidence to weigh in on the normative importance of career diversity on the bench. For an argument that empirical research should address the normative dimensions of judging, see Lawrence M. Friedman et al., *State Supreme Courts: A Century of Style and Citation*, 33 STAN. L. REV. 773 (1981).

^{4.} See, e.g., John B. Gates & Glenn A. Phelps, Intentionalism in Constitutional Opinions, 48 POL. RES. Q. 245, 246 (1996); Robert M. Howard & Jeffrey A. Segal, An Original Look at Originalism, 36 LAW & SOC'Y REV. 113, 127–28 (2002); Stefanie A. Lindquist & David E. Klein, The Influence of Jurisprudential Considerations on Supreme Court Decisionmaking: A Study of Conflict Cases, 40 AM. J. POL. SCI. 135, 136 (2006); Mark J. Richards & Herbert M. Kritzer, Jurisprudential Regimes in Supreme Court

HOUSTON LAW REVIEW

[45:3]

decision to interpret its own precedent,⁵ patterns of citation both within and across opinions,⁶ and linguistic analyses of opinion content⁷ and other court materials.⁸ While the particular goals of these projects vary, each is interested in explaining an element of Supreme Court decisionmaking and draws from the Court's opinions as the foundation for its empirical inquiry. Another common attribute of these studies is that they move beyond merely tallying the votes and voting behavior of Justices on the Court, a characteristic that greatly limited previous scholarship in this area. That is, while there is surely something to be gained by understanding Justices' voting behavior, it provides a blunt measure of what legal scholars care about—law itself.

In this Article, we extend upon these efforts to understand law through empirical scholarship by providing a comprehensive analysis of a deceptively simple yet powerful characteristic of the

7. Kevin T. McGuire & Georg Vanberg, Mapping the Policies of the U.S. Supreme Court: Data, Opinions, and Constitutional Law 12 (Sept. 1, 2005) (unpublished manuscript, on file with the Houston Law Review) (using language in opinions as points of data to characterize the ideological content of an opinion) This paper was presented at the 2005 Annual Meeting of the American Political Science Association.

8. See generally Michael Evans et al., *Recounting the Courts? Applying Automated Content Analysis to Enhance Empirical Legal Research*, 4 J. EMPIRICAL LEGAL STUD. 1007 (2007) (assessing the use of machine learning techniques in text classification to enable content analysis of legal documents).

Decision Making, 96 AM. POL. SCI. REV. 305, 305 (2002).

^{5.} See generally THOMAS G. HANSFORD & JAMES F. SPRIGGS II, THE POLITICS OF PRECEDENT ON THE U.S. SUPREME COURT (2006); James F. Spriggs, II & Thomas G. Hansford, *The U.S. Supreme Court's Incorporation and Interpretation of Precedent*, 36 LAW & SOC'Y REV. 139 (2002) (claiming judges who are ideologically compatible with a case are more likely to interpret it positively); James F. Spriggs, II & Thomas G. Hansford, *Explaining the Overruling of U.S. Supreme Court Precedent*, 63 J. POLITICS 1091 (2001).

See generally Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, Warren 6. Court Precedents in the Rehnquist Court, 24 CONST. COMMENT. 3 (2007) (examining the Rehnquist Court's citation of Warren Court opinions to offer insight into judicial decisionmaking); James H. Fowler et al., Network Analysis and the Law: Measuring the Legal Importance of Precedents at the U.S. Supreme Court, 15 POL. ANALYSIS 324 (2007) (using network analysis to create measures of case centrality based on citation patterns in Supreme Court opinions); Montgomery N. Kosma, Measuring the Influence of Supreme Court Justices, 27 J. LEGAL STUD. 333, 343 (1998) (creating an economic model for the evaluation of Supreme Court justices using citations from Supreme Court precedent); William M. Landes et al., Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges, 27 J. LEGAL STUD. 271 (1998) (measuring the influence of particular judges based on the number of times their opinions are cited); David G. Post & Michael B. Eisen, How Long Is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems, 29 J. LEGAL STUD. 545, 571 (2000) (exploring possible links between citation practices and a theory of legal decisionmaking); Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, The Reagan Revolution in the Network of Law 2 (June 2006) (unpublished manuscript, on file with the Houston Law Review) (examining Ronald Reagan's efforts to remake the Judiciary with Supreme Court precedent by looking at Supreme Court opinions and their citations).

Court's majority opinions: their length. While generations of jurists and commentators have often made observations about opinion length, and occasionally even offered preliminary evidence,⁹ there has not yet been, to the best of our knowledge, a large-scale systematic empirical investigation of opinion length at the U.S. Supreme Court. The results of the empirical analyses conducted below suggest this oversight is unfortunate and there is much to be gained from systematically studying opinion length. By using tools of social science, we not only lay bare the causal underpinnings of opinion length but also begin to shed light on the normative debates surrounding this topic. For example, many scholars and judges criticize the Court's tendency to write longer opinions and suggest law clerks are to blame for this outcome.¹⁰ We show that this normative conclusion rests on a weak empirical foundation, as law clerks are not the principal factor behind longer opinions.

To reach these conclusions we proceed in several steps. First, we review what a wide range of individuals-from judges to lawyers to scholars—have said about opinion length, with a focus on explicating why opinion length as a quantity is intrinsically important. To preview, we submit that law depends on the language in a Court opinion, and an opinion's length is one measurable characteristic of legal language that we argue (and empirically demonstrate) is meaningful. Second, we examine various longitudinal trends in the length of the Court's opinions and subject existing explanations about variation in opinion length over time to empirical scrutiny. Third, we shift our focus from examining change in opinion length across time and take up the individual case-level determinants of opinion length. Here, we draw upon a half century of political science research and put forward hypotheses regarding the length of individual opinions, which we then empirically test. Fourth, we examine the importance of opinion length by analyzing the role it plays in influencing the manner in which lower federal courts utilize Court precedent in their opinions. This final analysis is one way of charting the influence of opinion length on the development of law in the lower federal courts. Finally, we conclude with thoughts for additional research in this developing area.

^{9.} See, e.g., RICHARD A. POSNER, THE FEDERAL COURTS: CHALLENGE AND REFORM 146 (1996) (arguing for the existence of a connection between long court opinions and the use of judicial clerks).

^{10.} *Id*.

HOUSTON LAW REVIEW

[45:3]

II. WHY STUDY MAJORITY OPINION LENGTH?

That something so basic as the length of the Supreme Court's opinions has heretofore eluded the probing eye of systematic empirical research might be evidence to suggest opinion length is fundamentally uninteresting and not worthy of detailed analysis. We think this conclusion is difficult to support. At the most basic level, the length of majority opinions is likely to embody a variety of concepts of interest to legal scholars—such as an opinion's clarity, scope, and amount of dicta, among other potential quantities. That is, opinion length is one element of the language of an opinion and thus the legal doctrine being proposed by the Court. As Tiller and Cross note, "Legal academics understand that the language of judicial opinions represents the law."¹¹ Judge Patricia Wald agrees with this sentiment, pointing out that "words matter."¹² The length of an opinion is thus one indicator of the language in a decision.

Scholars have discussed opinion length and, on occasion, have offered preliminary data analyses, but they have yet to engage in a large-scale investigation of opinion length at the Supreme Court. Studies suggest opinion length may provide indicators of legal style,¹³ culture,¹⁴ quality,¹⁵ complexity,¹⁶ and even the extent to which the law within an issue area has "settled."¹⁷ For example, Judge Richard Posner presents data on the average length of federal appellate majority opinions by

^{11.} Emerson H. Tiller & Frank B. Cross, *What is Legal Doctrine*?, 100 NW. U. L. REV. 517, 518 (2006).

^{12.} Patricia M. Wald, *The Rhetoric of Results and the Results of Rhetoric: Judicial Writing*, 62 U. CHI. L. REV. 1371, 1394 (1995).

^{13.} See, e.g., Richard A. Posner, Judges' Writing Styles (And Do They Matter?), 62 U. CHI. L. REV. 1421, 1429 (1995) (stating judicial opinions in the "pure style" are commonly lengthy); Peter H. Schuck & E. Donald Elliott, To the Chevron Station: An Empirical Study of Federal Administrative Law, 1990 DUKE L.J. 984, 1003–04 (1990) (using opinion length and number of footnotes to reveal trends in judicial matters such as issue complexity, precedential significance, and legal styles of various courts).

^{14.} See Friedman et al., supra note 3, at 775 ("Changes in *length* of opinions over time may reveal changes in legal culture."); see also POSNER, supra note 9, at 146 (claiming the increased opinion length is in part due to the availability and role of law clerks).

^{15.} See Robert A. Kagan et al., *The Evolution of State Supreme Courts*, 76 MICH. L. REV. 961, 970–73 (1978) (proposing that length, density of citations, and tendency to cite authorities other than cases may bear on the quality of court opinions).

^{16.} See Schuck & Elliott, *supra* note 13, at 1003–04, 1073 (testing various hypotheses regarding the complexity of administrative law issues based on the length of opinions and the number of footnotes in opinions).

^{17.} See Scott Phillips & Ryken Grattet, Judicial Rhetoric, Meaning-Making, and the Institutionalization of Hate Crime Law, 34 LAW & SOC'Y REV. 567, 587 (2000) (proposing court opinions will be shorter when the meaning of the law is fixed).

decade (and selected years) from 1895 through 1993. He shows that the size of Supreme Court opinions rose substantially between 1960 and 1969 and between 1969 and 1972, and suggests law clerks are one of the principal reasons for this increase.¹⁸ In addition, Peter Schuck and E. Donald Elliott offer data on administrative law cases in the U.S. courts of appeals. Their analyses reveals that the D.C. Circuit wrote longer and more heavily footnoted opinions than the other circuits and concludes that some of the variation in opinion length resulted from differences in case characteristics, such as whether cases involved agency rulemaking proceedings rather than agency adjudications.¹⁹

The length of the Court's opinions also provides an indicator of the Court's overall workload. To this end, opinion length, or perhaps the total opinion length for a given Term, might provide a reasonable estimate of whether the work product of the Court has decreased in a meaningful way. For some time now, scholars and commentators have made much of the declining size of the Court's plenary docket.²⁰ By this metric, so the conventional wisdom goes, the Court of more recent years has worked less than Courts of previous decades. For the same reasons that a simple "affirm or reverse" rendering of the Court's final decision at the merits misses important variation in Court outputs,²¹ the same could be said of the evidence used to support workload related arguments. This is one reason why scholars examine, among other things, opinion length when considering variation in workload across courts.²²

The Court's opinion length has potential normative implications as well. Many commentators contend Supreme Court opinions are excessively long and argue longer opinions result in a variety of negative consequences. For example, a

21. See Friedman et al., supra note 3, at 266 (stating reasoning in judicial opinions is an important factor in the precedential weight that opinions receive).

^{18.} POSNER, supra note 9, at 146.

^{19.} Schuck & Elliot, *supra* note 13, at 1004.

^{20.} See, e.g., DAVID M. O'BRIEN, STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS 227 (7th ed. 2005) (referring to the decline of the plenary docket as "striking"); Arthur D. Hellman, *The Shrunken Docket of the Rehnquist Court*, 1996 SUP. CT. REV. 403, 419–25 (1996) (undermining the theory that shifts in the ideological makeup of the Supreme Court affects the Court's caseload); Linda Greenhouse, *Case of the Dwindling Docket Mystifies the Supreme Court*, N.Y. TIMES, Dec. 7, 2006, at A1 (suggesting causes of the recent decline in the Supreme Court's docket).

^{22.} See POSNER, supra note 9, at 78–86 (analyzing the relationship between a change in the average opinion length of a court and a change in a court's caseload); Kagan et al., supra note 15, at 962 (noting a state supreme court's caseload typically increases as the state's population increases).

HOUSTON LAW REVIEW

[45:3]

scholar writing nearly sixty years ago recognized the economic cost of the time wasted—both by personnel on a court that authored excessively long opinions and the scores of lawyers whose time was wasted reading through them—due to long opinions.²³ Others have noted lengthy opinions make even more difficult the public's task of decoding the Court's decisions, thereby further delegating responsibility of explaining the Court's work to the half dozen or so reporters who cover the Court. Longer opinions, that is, reduce the likelihood ordinary people will read them and thus remove "the opinions from the scrutiny of the governed."²⁴

Beyond negative externalities such as time wasted and public disengagement, lengthy opinions might also pose problems for lower court enforcement of the Supreme Court's decisions. Here, longer opinions might mean a surplus of more ambiguous language, which could complicate the lower courts' task of understanding what the Supreme Court wants. Judge Richard Posner observes that longer opinions "increase the time required for reading an opinion" as well as "reduce the opinion's usefulness as a guide to what the judges are likely to do in future cases."25 Longer opinions therefore potentially reduce legal clarity and predictability and "invite uncertainty and confusion about the Court's rulings, interpretation of law, and policy-making."26 Longer opinions, that is, may broaden the degree of discretion lower court judges enjoy in deciding cases.²⁷ As a result, judges and other actors may interpret the holding of longer opinions in broader terms and apply them to a wider array of factual circumstances. By accident or intent, therefore, lengthy opinions might ultimately undermine the degree of compliance exercised by the lower courts, granting lower courts greater ability to "shirk" from the Supreme Court's policy choices. For both reasons, for instance, Chief Justice Warren endeavored to write a short opinion in Brown v. Board of Education.²⁸

^{23.} Charles A. Beardsley, *Judicial Draftsmanship*, 24 WASH. L. REV. & ST. B.J. 146, 149 (1949); *see also* Herbert B. Gregory, *Shorter Judicial Opinions*, 34 VA. L. REV. 362, 369 (1948).

^{24.} Ray Forrester, Supreme Court Opinions—Style and Substance: An Appeal for Reform, 47 HASTINGS L.J. 167, 177 (1995).

^{25.} POSNER, *supra* note 9, at 147.

^{26.} O'BRIEN, supra note 20, at 303.

^{27.} For a discussion of judicial discretion, defined as "situations in which a judge is required to exercise judgment because the outcome of a case is not fully determined by existing legal materials," see Kim, *supra* note 2, at 388.

^{28.} Brown v. Bd. of Educ., 347 U.S. 483 (1954); see also BERNARD SCHWARTZ, SUPER CHIEF: EARL WARREN AND HIS SUPREME COURT—A JUDICIAL BIOGRAPHY 97 (1983) (reporting that, among other things, Chief Justice Warren asked his clerk to write a brief

The Justices themselves have also addressed the topic of opinion length. Justice Powell, aware of an opinion length's importance, wrote a memo to law clerks stressing the need to avoid long and heavily footnoted opinions: "A frequent and justified criticism of this Court is that opinions are too long and like many law review articles and notes—are overburdened with footnotes. I prefer 'lean' opinions, but it is important to meet honestly and fairly the serious arguments advanced by the losing side or by a dissenting opinion. As mentioned above, the Court often is criticized fairly for opinions that leave lower courts and lawyers in doubt as to the law. My opinions should leave no doubt."²⁹ Other Justices are well known for their individual writing styles, such as Justice O'Connor's³⁰ and Justice Breyer's³¹ dislike of footnotes.

From scholars to commentators to jurists, a diverse set of individuals has commented on the importance of opinion length. We deploy their arguments and words to shore up a key point: the length of the Court's majority opinions is an important, albeit basic, aspect of the work produced by the Court. As we suggested above, opinion length is one aspect of the overall language in an opinion and thus captures features of the legal ruling. We are not suggesting the amount of verbiage in an opinion measures the content of law in a direct sense, but we nonetheless submit that it represents an empirical referent capable of revealing interesting variation that can inform us about the dynamics of the Court's decisionmaking. We suspect many share this conclusion. The remainder of this Article seeks to subject opinion length to the same type of rigorous empirical examination that so many other elements of Supreme Court decisionmaking have received.³²

opinion for the *Brown* decision).

^{29.} Law Clerks Briefing Notes from Justice Lewis F. Powell, Jr., U.S. Supreme Court 20–21 (Sept. 10, 1984) (on file with Washington and Lee University Law School).

^{30.} See Forrester, supra note 24, at 167; Kent D. Syverud, Lessons from Working for Sandra Day O'Connor, 58 STAN. L. REV. 1731, 1731–33 (2006).

^{31.} In Justice Breyer's Opinion, a Footnote Has No Place, N.Y. TIMES, July 28, 1995, at B18; cf. Stephen R. Barnett, Letter to the Editor, Breyer on Footnotes Needs a Footnote, N.Y. TIMES, Aug. 4, 1995, at A26 (criticizing certain elements of Justice Breyer's writing style).

^{32.} Nearly every aspect of the Court's decisionmaking process has received scholarly scrutiny. This includes, for example, the Court's decision to review a case, Gregory A. Caldeira & John R. Wright, Organized Interests and Agenda Setting in the U.S. Supreme Court, 82 AM. POL. SCI. REV. 1109, 1111 (1988); the role of oral arguments, Timothy R. Johnson, James E. Spriggs II & Paul J. Wahlbeck, Oral Advocacy Before the United States Supreme Court: Does it Affect the Justices' Decisions?, 85 WASH. L. REV. 457, 462 (2007); the opinion assignment, Forrest Maltzman & Paul J. Wahlbeck, A Conditional Model of Opinion Assignment on the Supreme Court, 57 POL. RES. Q. 551, 552

HOUSTON LAW REVIEW

[45:3]

III. LONGITUDINAL TRENDS IN MAJORITY OPINION LENGTH

The length of the Court's majority opinions might, as we suggest above, have ramifications for a wide variety of audiences, including the public, scholars, and judges in the lower courts. Significant disagreement is bound to exist about both the extent (small versus large) and directionality (good versus bad) of these ramifications. What scholars and commentators are far less likely to disagree about, however, is the simple trend in opinion length across time—mainly that the average majority opinion of the Court has increased in recent years, a conclusion that is anecdotally supported by some of the Court's relatively recent decisions.³³ In this Part, we seek to provide an empirical perspective on this trend by both describing the overall changes in opinion length and then testing existing explanations for these changes.

A. Data and Methods

To analyze the trends in opinion length, we downloaded from LexisNexis every orally-argued, signed, or per curiam majority opinion decided from 1791 to 2005, for a total of 26,715 opinions.³⁴ We then used a computer script written in R³⁵ to count the number of words in the majority opinion of each case, treating as separate the main body of the opinion and its footnotes. We also separately counted the number of words in the different opinions

^{(2004);} conference votes, Forrest Maltzman & Paul Wahlbeck, *Strategic Policy Considerations and Voting Fluidity on the Burger Court*, 90 AM. POL. SCI. REV. 581, 583 (1996) [hereinafter Maltzman & Wahlbeck, *Strategic Policy Considerations*]; the opinion writing process, Paul J. Wahlbeck, James F. Spriggs, II & Forrest Maltzman, *Marshalling the Court: Bargaining and Accommodation on the United States Supreme Court*, 42 AM. J. POL. SCI. 294, 301–02 (1998); the final vote on the merits, JEFFREY A. SEGAL & HAROLD J. SPAETH, THE SUPREME COURT AND THE ATTITUDINAL MODEL REVISITED 287 (2002); and whether the decisions of the Court influence political, economic, or social outcomes, GERALD N. ROSENBERG, THE HOLLOW HOPE: CAN COURTS BRING ABOUT SOCIAL CHANGE? 157, 247 (1991).

^{33.} In December 2003, the Court released its decision in the campaign finance case of *McConnell v. FEC*, 540 U.S. 93 (2003), which featured more than a half dozen opinions spanning across over 270 pages in the federal reporter. More recently, the opinion in *Parents Involved in Community Schools v. Seattle School District No. 1*, 127 S. Ct. 2738 (2007), weighed in at a hefty 185 pages.

^{34.} Our list of all orally-argued majority opinions released by the Court comes from Fowler et al., *supra* note 6, at 327, who identified 26,681 opinions. In the course of verifying their list we added 34 opinions they incorrectly excluded.

^{35.} R is a free and open source software "environment for statistical computing and graphics." *See* What is R?, http://www.r-project.org/about.html (last visited Sept. 5, 2008). In particular, R has a series of tools to assist in the processing and manipulating of large batches of text files.

in the case, both concurring and dissenting.³⁶ After reading in an opinion's text file, we searched for "OPINION:," which is the term used by LexisNexis to delimit the actual text of an opinion from the headnotes, syllabus, or other content that precedes the actual opinion text.³⁷ This was our starting point for counting the number of words in the majority opinion. We also wrote a script to determine when to stop counting words in the opinion. If the opinion was unanimous, our procedure continued counting words until the end of the text file.³⁸ When an opinion was not unanimous, that is, when there was a concurring or dissenting opinion, we stopped the word count at the line immediately preceding the field delimiter "DISSENTBY:" or "CONCURBY:", depending on which came first.³⁹

According to our data, the longest majority opinion, including footnotes, is *Buckley v. Valeo*,⁴⁰ which weighs in with a hefty 65,398 words and is nearly 50% longer than the second longest opinion, *McConnell v. Federal Election Commission*,⁴¹ at 43,445 words.⁴² Focusing only on footnotes, the majority opinion

^{36.} Before counting words, we also removed citations to other cases from the opinions. We took this step because modern opinions are likely to cite several reporters for any given internal citation, whereas earlier opinions will have systematically fewer reporters because many did not yet exist. Using the Bluebook as our guide, we compiled a lengthy list of roughly 150 reporter citation stems that appeared in the data and then executed over 1,200 search and replace commands to eliminate many of the citations in our text files. To verify our intuition about the systematic changes in reporter citation style, we compared the difference in total calculated length using our "cleaned" opinion files with that of the original. Prior to 1940, the original averaged roughly 65 more words than the cleaned version. After 1940, however, that difference jumps by a factor of nearly five to around 315 words. Failure to make this adjustment, then, would systematically overstate the growth in opinions in a way wholly unrelated to the actual content of the opinions themselves.

^{37.} There were a handful of opinions in which "OPINION:" appeared multiple times. We identified these cases using a separate script and edited them by hand to ensure that we were counting only words in a majority opinion.

^{38.} LexisNexis occasionally adds a "Reference" section in an opinion, which provides electronic links to materials cited within the opinion. When this section was present, we stopped counting words at the line immediately before the "REFERENCES:" field delimiter.

^{39.} We should note that our script for counting words in majority opinions includes any language contained in an appendix to the majority opinion. The Court's placement of appendices differs substantially over time, and thus there was no practical way for us to write a script that would reliably remove words in appendices from the majority opinion. We were able to determine if an opinion contained an appendix, and account for such in the analysis below that explains the number of words in individual majority opinions. *See infra* Part IV. We control for this by including an independent variable for whether an opinion contains one or more appendices.

^{40.} Buckley v. Valeo, 424 U.S. 1 (1976).

^{41.} McConnell v. FEC, 540 U.S. 93 (2003).

^{42.} Rounding out the top seven are *McGowan v. Maryland*, 366 U.S. 420 (1961) (42,437 words); *The Dos Hermanos*, 15 U.S. (2 Wheat.) 76 (1817) (37,442 words);

HOUSTON LAW REVIEW

[45:3]

with the largest number of footnote words is McGowan v. $Maryland^{43}$ with 17,197 footnote words, which constitutes nearly 41% of the opinion's overall length.⁴⁴

B. Results: Trends Across Time

We first characterize the nature of opinion length and related quantities and how these quantities have changed across time. In a subsequent Part we test existing accounts that explain some of these longitudinal changes. By way of preview, our analyses show that conventional accounts of why the Justices have become more verbose, such as the increased usage of law clerks as opinion drafters, do not provide much leverage for answering this question. Rather, the most compelling explanation is that increases in opinion length followed the historical development of the Court as an independent and powerful institution of American government.

1. The Quantity and Unanimity of Majority Opinions. As we alluded to above, a large group of scholars and commentators has made much of the Court's shrinking docket.⁴⁵ Much has also been made by those in law and political science of the demise of consensual norms and the rise of concurring or dissenting opinions written by the Court.⁴⁶ The top and bottom panels of Figure 1 provide a historical view of these two quantities, respectively.

Communist Party of the U.S. v. Subversive Activities Control Board, 367 U.S. 1 (1961) (34,279 words); and Smith v. Turner, 48 U.S. (7 How.) 283 (1849) (33,964 words).

^{43.} McGowan v. Maryland, 366 U.S. 420 (1961).

^{44.} See fig.3, *infra*, for a longitudinal perspective on the ratio of footnote words to an opinion's overall length.

If we sum across the total length of an opinion, including any separate concurrences and dissents, the longest opinion is *Scott v. Sandford*, 60 U.S. (19 How.) 393 (1856), which clocks in with a hefty 108,326 words. Rounding out the rest of the top five are *Smith v. Turner*, 48 U.S. (7 How.) 283 (1849) (84,722 words); *United States v. Castillero*, 67 U.S. (2 Black) 17 (1862) (84,571 words); *McConnell v. FEC*, 540 U.S. 93 (2003) (79,927 words); and *Furman v. Georgia*, 408 U.S. 238 (1972) (72,516 words).

^{45.} See supra note 20 and accompanying text.

^{46.} See, e.g., Lee Epstein, Jeffrey A. Segal & Harold J. Spaeth, The Norm of Consensus on the U.S. Supreme Court, 45 AM. J. POL. SCI. 362, 362, 364–65 (2001) (providing evidence of the "existence of a norm of consensus" followed by the Supreme Court); Thomas G. Walker, Lee Epstein & William J. Dixon, On the Mysterious Demise of Consensual Norms in the United States Supreme Court, 50 J. POLITICS 361, 364, 384–85 (1988) (examining the factors contributing to a dramatic change of the consensus norms on the Supreme Court).

2008]

SUPREME COURT OPINION LENGTH



Figure 1: Time series plots of the number of written opinions released each year by the Court (top panel) and proportion of those written opinions with at least one concurring or dissenting opinion (bottom panel), 1791 to 2005. Data for this figure and other figures in this section are derived from opinions downloaded from LexisNexis and processed in an R script written by the Authors. See infra Part III.A.

As the top panel makes clear, the number of opinions coming down from the Marble Palace has diminished significantly during the last twenty years. The Court released 160 opinions in 1986 compared to only 65 in 2005. What the figure most poignantly reveals, however, is just how many fewer opinions the Court of today writes compared to its counterpart in the late 19th century, when the Court issued over 250 written opinions per year. Judging from the bottom panel of the figure, it is does not appear as though dissensus can be blamed for this recent decrease in output. Indeed, the rate of non-unanimous opinions has remained relatively steady, between 70% and 80%, over the same time period that the number of opinions written was reduced by nearly 60%.

633

HOUSTON LAW REVIEW

[45:3]

2. Majority Opinion Length. Figure 2 presents two panels that speak to the primary topic of this Part: the changes in the length of the Court's majority opinions over time. The top panel shows the median length of majority opinions, footnotes included, across the Court's entire history. One of the most striking, and expected, features of this panel is the large increase in length across the entire time series. While the median length of the Court's majority opinions hovered around 763 words for the first twenty years of its existence, the same quantity more than quintupled to 4,250 words for the most recent twenty-year period.

Of particular note in the last one hundred or so years are two substantial and sudden changes in the median length. First, we observe a sharp decrease occurring over a three-year period starting in 1949, when the median length dropped from 3,064 words in 1948 to 2,129 words in 1951—a 30% decline. Indeed, the average size of majority opinions did not return to the 1948 level until nearly three decades later, in 1972. The second dramatic change, this one a substantial increase, occurred shortly after the start of the Burger Court. In 1969, the median length was 2,530 words. By 1974, just five years later, it had jumped by more than 80% to 4,656 words. Indeed, the change in opinion length over these few years is one of the starkest transitions in the entire data series and likely is what sparked interest and commentary on the increasing length of the Court's opinions.



Figure 2: Time series plots of the median number of words in the Court's majority opinions, including footnotes (top panel) and the size of the interquartile range of opinion length (bottom panel), 1791 to 2005. See caption to Figure 1, supra, for information on where we obtained these data.

This panel also reveals other patterns in the data that most commentators would not have likely anticipated. Prior to the massive increase in the early 1970s, opinion length appeared to exhibit almost a cyclical characteristic of a lengthening period followed by a shortening period, which might seem more at home in economic data than in a measure of the Court's opinion length. A period of growing length from 1791 through approximately 1830 gave way to a period of decline that stretched until 1870, when length started to rise again. This period of growth continued until the turn of the 20th century. The final cycle appeared to peak in the late 1940s, but instead of a prolonged period of decline, length stabilized during the Warren Court years before reaching modern-day levels during the early Burger Court years.

635

HOUSTON LAW REVIEW

[45:3]

The bottom portion of Figure 2 presents the interquartile range⁴⁷ of total majority opinion length, which provides a measure of the degree of variability or consistency in the length of the Court's opinions for a given year. In general, changes in the interquartile range tend to track with changes in the median length. Of particular interest is the increase in size of the interquartile range in the late 1950s and early 1960s, i.e., the years immediately preceding the significant increase in median length. This suggests that while the median opinion in the pregrowth years was still shorter than it would be five years later, the tail of the distribution became increasingly populated with longer opinions. This provides at least some evidence that the seeds of opinion length growth were planted for some time before they sprouted.

3. Majority Opinion Footnote Length. One of the most common criticisms made against modern judicial opinions is their abundance of footnotes.⁴⁸ This critique is generally bundled with the claim that Justices' usage of law clerks in drafting opinions has made opinions lengthier and more like the law reviews that many of the law clerks worked on during law school.⁴⁹ While we discuss law clerks in detail below, we now focus solely on the usage of footnotes across time, which we present in Figure 3.

^{47.} The interquartile range (IQR) is formally defined as the difference between the 75th and 25th percentile of a measured variable. As the IQR increases, the data are more widely distributed, whereas a smaller IQR value indicates significant clumping around the middle of the data. In this regard, it is similar in interpretation to the standard deviation but is preferable because it is not sensitive to highly discrepant observations, so-called outliers. *See* WILLIAM S. CLEVELAND, VISUALIZING DATA 25 (1993); *see also* ALAN AGRESTI & BARBARA FINLAY, STATISTICAL METHODS FOR THE SOCIAL SCIENCES 62 (3d ed. 1997).

^{48.} See, e.g., Forrester, supra note 24, at 186 ("Footnotes have been a public nuisance of long standing.").

^{49.} See ANTHONY T. KRONMAN, THE LOST LAWYER: FAILING IDEALS OF THE LEGAL PROFESSION 347–51 (1993) (tracing the effect of law clerks on judicial style); O'BRIEN, supra note 20, at 140–41 (same); POSNER, supra note 9, at 146–57 (same).

On the characteristics of Supreme Court law clerks, see generally TODD C. PEPPERS, COURTIERS OF THE MARBLE PALACE: THE RISE AND INFLUENCE OF THE SUPREME COURT LAW CLERK (2006); ARTEMUS WARD & DAVID L. WEIDEN, SORCERERS' APPRENTICES: 100 YEARS OF LAW CLERKS AT THE UNITED STATES SUPREME COURT (2006).

2008]

SUPREME COURT OPINION LENGTH



Figure 3: Time series plot of the median footnote ratio, which is the total number of footnote words divided by the total number of words in the majority opinion, 1930 to 2005. Note that prior to 1930 the median ratio was zero. See caption to Figure 1, supra, for information on where we obtained these data.

For each opinion in our data we calculated the footnote ratio, which is the total number of footnote words in a majority opinion divided by the sum of footnote and nonfootnote words for the same opinion. The data in Figure 3 represent the median of this ratio for a given year. An aspect of this figure that bears mentioning is the relative recentness of footnote usage. For all years prior to 1930 the median footnote ratio is equal to zero, and we see a reasonably steep, mainly linear, increase from 1930 through the early 1970s. It is interesting to note this increase in footnote usage corresponds roughly to the decline in the norm of consensus. It appears the big rise in the Justices' use of footnotes, about 1939, occurred just a bit earlier than the significant increase in separate opinions, about 1942.⁵⁰

There are two other notable features in the footnote ratio of majority opinions. First, we observe that the substantial increase in majority opinion length in the early Burger Court years was in part due to a steep increase in the ratio of footnotes to main text. We see, for example, the average footnote ratio is approximately 21% during the Warren Court years, while this ratio climbed to about 28% during the Burger Court years, peaking at over 35% in 1977 and 1981.

637

^{50.} See supra note 46 and accompanying text (discussing the rise of dissensus on the Court).

HOUSTON LAW REVIEW

[45:3]

Second, and importantly, we observe a tremendous drop in the ratio of footnotes to nonfootnote words beginning around 1986. Thus, our data show the Rehnquist Court's tendency to write long opinions is not due to a proliferation of footnote words. While the raw length of footnotes might be longer than in earlier time periods (owing to the overall length of opinions), the relative proportion of opinions that is footnotes versus "main text" is at levels that are significantly lower, around 12.5%, than those experienced in previous years. Indeed, one must go back to the early years of the Court's use of footnotes—the 1930s—to find a footnote-to-text ratio this low. We can thus conclude footnotes are not the main culprit in the length of contemporary opinions.

C. The Impact of Law Clerks on Majority Opinion Length

The usage of law clerks by the Justices is one of the most commonly identified causes for the Court's increased propensity to pen longer opinions.⁵¹ In this regard, the sentiment of Judge Posner is typical when he states law clerks "are the proximate cause of the increasing prolixity of federal judicial opinions."⁵² Remarkably, no one has gone beyond a casual inspection of opinion length to determine if these intuitions stand up to rigorous empirical scrutiny. We do so in two steps, focusing first on the entire time series and second on the modern period since the start of the Warren Court in 1953.

1. Institutional Usage of Law Clerks, 1791–2005. To be sure, the ways in which Justices utilize law clerks have changed dramatically throughout the Court's history. One approach, which we borrow for our long term analysis, has been to consider several different regimes of law clerk usage.⁵³ Before the late 1880s, anything even vaguely resembling law clerks was absent from the Court.⁵⁴ In the Court's early years, there was no formal reporter of its decisions, and the Justices hired personal messengers using their own money.⁵⁵ The duties of these messengers were extremely limited, including acting as a barber

^{51.} See supra note 49 and accompanying text; see also Forrester, supra note 24, at 180–81 (noting the use of opinion drafts written by law clerks "may also contribute to the undue length of many opinions").

^{52.} POSNER, supra note 9, at 156.

^{53.} The typology and description of law clerk roles we provide in this section is drawn from PEPPERS, *supra* note 49.

^{54.} Id. at 43.

^{55.} Id. at 39.

or chauffer.⁵⁶ The first formal employees of the Court were not hired until 1816, when the Court formalized the reporter position, and then in the 1860s, when it created the position of Court Marshall and authorized funds to pay for the Justices' messengers.⁵⁷ From 1886 to 1919, law clerks were utilized as stenographers.⁵⁸ As stenographers, the clerks' role was limited to the literally mechanical task of getting opinions published and ensuring the completion of routine office work.⁵⁹ Unlike clerks today, they did not work as active participants in the shaping of opinions. Law clerk usage underwent two subsequent regime changes. From 1920 to 1952, law clerks took on the role of an assistant, which entailed some increased delegation of tasks to clerks, but most Justices were still deeply involved in reviewing the original petitions for certiorari or an appeal.⁶⁰ In the context of opinion writing, most Justices utilized their clerks for the editing of opinions, but only a handful delegated the initial drafting of opinions to their law clerks.⁶¹ Finally, from 1953 through the present, law clerks went from being assistants to being something akin to law firm associates.⁶² This current regime is characterized by the widespread delegation of tasks throughout all stages of a case's consideration, from certiorari memoranda to pre-oral argument bench memoranda to the drafting and editing of the Court's written opinions.⁶³ With the transition to each new regime of law clerk usage, there is a meaningful increase in their involvement in the Court's activities, especially the drafting and editing of opinions.

The top panel of Figure 4 maps these law clerk regimes onto the same median opinion length-time series plot presented earlier. Importantly, the change points for the various regimes do not appear to translate into direct increases in opinion length. The data show opinions under the associate regime, with a median opinion length of 4,067 words, are significantly longer than those in any of the earlier regimes; opinions in the assistant period, with a median length of 1,992 words, are significantly

62. Id. at 145.

^{56.} Id. at 38–39.

^{57.} Id.

^{58.} Id. at 70, 83.

^{59.} Id.

^{60.} Id. at 83-84.

^{61.} Id. at 143 tbl.4.1.

^{63.} Id. at 205.

1950

1955

1958

1990

640 HOUSTON LAW REVIEW [45:3

longer than those penned when no clerks worked at the Court, where the median length was 1,380 words.⁶⁴



Median Length and Clerk Usage Regime

Figure 4: Time series plot of the median opinion length with law clerk usage superimposed. The top panel shows law clerk regimes, 1791 to 2004, while the bottom panel displays the number of Justices whose law clerks routinely engaged in the initial drafting of majority opinions, 1953 to 1990. Opinion length data come from the Authors, see caption to Figure 1, supra, and data on law clerks come from Peppers, supra note 49, at 83, 145– 46, 190–91.

1966 1967

1971

Year

However, when subjected to more rigorous analysis these differences across clerk regimes become difficult to support. Utilizing appropriate statistical techniques for time series data such as these, the increase in length accompanying the evolution of law clerk usage on the Court disappears.⁶⁵ Our inability to

^{64.} To assess the significance of the difference, we performed a simple difference-inmeans test between the regime in question and each of the previous regimes (e.g., Associate versus Assistant). For each, the probability of observing a difference of such magnitude by chance variation alone is less than 0.01. On difference-in-means testing, see generally AGRESTI & FINLAY, *supra* note 47, at 159–67.

^{65.} Time series data present a unique challenge to researchers. Most time series data are autocorrelated, meaning observations are not independent across time. That is,

conclude that law clerk regime change led to increases in majority opinion length results in large part because there are a host of other factors that changed in tandem with the Justices' use of law clerks. These developments include, for instance, the expansion of the Court's discretionary docket, most notably in the Judiciary Act of 1925, which is likely to have resulted in systematic changes in the content of the Court's plenary docket.⁶⁶ Specifically, the Justices' wider latitude to select the cases they would decide on the merits is likely to have resulted in a plenary docket with a larger share of politically or legally important and legally complicated cases, many of which require longer written opinions.⁶⁷ Other developments over time that are coterminous with the usage of clerks include changes in technology (such as electronic access to cases and word processing programs), the creation of the certiorari pool,68 changes in the philosophy, temperament, and former career experiences of the Justices,⁶

an observation at time t is systematically related to the observation in the previous period, t-1 (and potentially t-2, -3, etc.). Controlling for this autocorrelation requires several diagnostic analyses and some trial and error. For our analyses we diagnosed our data as belonging to an autoregressive 1 (AR-1) process. We then conducted an interrupted time series analysis and estimated an Autorregressive Integrated Moving Average (ARIMA) model with dummy variables for the various clerk regimes (omitting one as the baseline category). We also included a series of control variables designed to tap into other likely institutional explanations for why opinion length has changed over time. See infra note 70 (discussing the development of the court as a political institution). The result of this analysis was to confirm what a visual inspection of the time series suggests: that there were no differences across clerk regimes once we controlled for the time serial component of the data. For time series methodology more generally, see RICHARD MCCLEARY & RICHARD A. HAY, JR., APPLIED TIME SERIES ANALYSIS FOR THE SOCIAL SCIENCES (1980); DAVID MCDOWALL ET AL., INTERRUPTED TIME SERIES ANALYSIS (1985).

^{66.} For a discussion of the Judiciary Act of 1925, Pub. L. No. 68-415, 43 Stat. 936, and its implications, see Edward A. Harnett, *Questioning Certiorari: Some Reflections Seventy-Five Years After the Judges' Bill*, 100 COLUM. L. REV. 1643 (2000) (discussing the Judges' Bill and the effect of certiorari on substantive constitutional law); Arthur D. Hellman, *Error Correction, Lawmaking, and the Supreme Court's Exercise of Discretionary Review*, 44 U. PITT. L. REV. 795, 797–803 (1982) (noting the effect of the Act on the Court's discretionary docket).

^{67.} For a discussion of changes in the agenda-setting process at the Court, see generally H.W. PERRY, JR., DECIDING TO DECIDE: AGENDA SETTING IN THE UNITED STATES SUPREME COURT (1991); John Paul Stevens, *The Life Span of a Judge-Made Rule*, 58 N.Y.U. L. REV. 1 (1983).

^{68.} See WARD & WEIDEN, supra note 49, at 45, 117-24 (discussing the creation of the certiorari pool and the subsequent expedition of processing certiorari requests); Stevens, supra note 67, at 10-14 (noting the debate surrounding the creation of the certiorari pool and the procedural changes it has effected).

^{69.} See Lee Epstein, Jack Knight & Andrew D. Martin, *The Norm of Prior Judicial Experience and Its Consequences for Career Diversity on the U.S. Supreme Court*, 91 CAL. L. REV. 903, 907–11, 923–26 (2003) (comparing the career backgrounds of Justices on the early Court to those of the Justices on the contemporary Court).

HOUSTON LAW REVIEW

[45:3]

and the like.⁷⁰ Thus, the most we can conclude from our statistical analysis is that clerks may have played some role in the production of longer Court opinions, but importantly, and contrary to the claims of some, they do not appear to have been the driving force behind this change.

2. Individualized Usage of Law Clerks, 1953-1990. The development of law clerks as an institutional component of the Court, we conclude, does not provide much leverage for explaining why the Court's opinions have increased in length. Since the clerk regimes described and depicted above capture the broadest usage of law clerks, the regimes necessarily abstract over the variation in clerk usage among the Justices. To provide an alternative perspective at the Justice level, we focus on the number of sitting Justices who utilized their law clerks to help draft majority opinions. This approach might provide a cleaner test of law clerk influence by focusing on the concrete duties of clerks. We depict the number of Justices whose law clerks routinely engage in opinion drafting in the bottom panel of Figure 4.⁷¹ As a descriptive matter, it is interesting to note there has been a clear and constant trend towards the delegation of these duties by the Justices. In the early 1950s, only Justices Frankfurter, Minton, and Warren are documented as routinely using clerks for opinion writing.⁷² With the departure of nearly every Justice on that Court,⁷³ the incoming Justice has opted to have his or her clerk write initial opinion drafts.

Here, too, we suggest the law clerk explanation is strained even at this finer level of analysis. Of prime importance is the overall stability of opinion length despite the fact that the

^{70.} These changes can be characterized, more generally, as the development of the Court as a political institution. One scholar has taken this approach and developed an index that scores the extent to which the Court is "institutionalized" in a given year as a function of seven specific measures. See Kevin T. McGuire, The Institutionalization of the U.S. Supreme Court, 12 POL. ANALYSIS 128, 134 tbl.1 (2004) (analyzing institutionalization of the Supreme Court on the basis of (1) rules of the Supreme Court; (2) Supreme Court location; (3) discretionary agenda; (4) federal judicial experience; (5) law clerks; (6) circuit duties; and (7) expenditures per justice). We deploy his measure below in examining alternative explanations for the overall increase in opinion length across time. See infra Part III.D.

^{71.} This information comes from two tables and the accompanying text in PEPPERS, *supra* note 49, at 143 tbl.4.1, 190 tbl.5.1. We use the "Opinion Writing" column of these tables. Our definition of "routine" corresponds to cell entries of "Yes" in Peppers' tables; that is, we recode "Infrequently" as meaning not routine.

^{72.} Id. at 106, 141, 149.

^{73.} The lone exception is when Justice Douglas, who did not use his clerks for opinion drafting, retired in 1971 and was replaced by Justice Stevens, who also does not use his clerks for opinion drafting. *Id.* at 7, 195.

number of Justices using clerks to draft opinions more than doubles from only three in 1953 to seven in 1967. Note that opinion length does spike shortly after 1971, when Justice Powell, who used his clerks for drafting opinions, replaces Justice Black, who did not.⁷⁴ That this change was somehow pivotal to activating the increased length seems highly implausible to us and is not supported by more sophisticated analyses of these data.⁷⁵

There is another potential clerk-related explanation that corresponds to an institutional development on the Court in the early 1970s: the creation of the certiorari pool (cert pool).⁷⁶ The cert pool divided the labor of summarizing the thousands of petitions for cert and appeals that came into the Court.⁷⁷ Prior to its creation, the chamber of each Justice separately reviewed all petitions.⁷⁸ With the creation of the cert pool, each petition was randomly assigned to one of the clerks whose parent Justice was participating in the pool.⁷⁹ The rationale for its creation was to provide additional time for law clerks to assist with other important duties such as research and opinion drafting.⁸⁰ Membership in the pool was initially limited to only five Justices (Burger, White, Blackmun, Powell, and Rehnquist).⁸¹ With each retirement of a nonpool member from the Court, the retiring Justice was replaced by someone who opted to participate in the pool.⁸² As of the 2007 Term, the only Justice who remained out of the pool was Justice Stevens.⁸³ Thus, the number of Justices participating in the pool whose clerks presumably have more time to spend drafting opinions increases roughly at the same rate as the number of Justices who use their clerks for opinion drafting, which means the cert pool, too, as a leading explanation for the increase in opinion length, must be rejected.

^{74.} *Id.* at 121, 187. At the same time, William Rehnquist replaced Justice Harlan; both Justices utilized their clerks for drafting purposes. *See id.* at 153–54; WILLIAM H. REHNQUIST, THE SUPREME COURT 297–303 (1987).

^{75.} Performing the type of time series analysis described above yields the same substantive conclusion. *See supra* note 65.

^{76.} On the creation of the certiorari pool, see WARD & WEIDEN, *supra* note 49, at 45, 117–24; Stevens, *supra* note 67, at 13–14.

^{77.} See WARD & WEIDEN, supra, note 49, at 117–19 (describing the creation and function of the certiorari pool).

^{78.} Id. at 117–18.

^{79.} Id. at 125.

^{80.} Id. at 45–46.

^{81.} Id. at 119.

^{82.} Id. at 45.

^{83.} Id.

HOUSTON LAW REVIEW

[45:3]

In short, it is most likely the case that clerks contributed somewhat to increases in opinion length—perhaps especially in the early Burger Court years, with the proliferation of footnote words—but we cannot conclude they are in any sense the main reason (in Judge Posner's words, "the proximate cause"⁸⁴) behind longer opinions.

3. Why Not Law Clerks? While it would be hard to deny clerks play a role in the output of the Court, looking to clerks as the principal causal factor greatly underestimates the role and involvement of the Justices and overinflates the law clerk's influence. The precise problems that are likely to give way to a large amount of law clerk influence are at their low point when it comes to opinion drafting.⁸⁵ Consider, by way of contrast, the role of modern law clerks at certiorari and the agenda-setting process. Here, law clerks are often the only individuals who read the vast majority of cert petitions, and the Justices depend upon them to summarize the pertinent information and provide a recommendation that is, more often than not, followed.⁸⁶ For example, in the certiorari process it is conceivable that, due to the clerks' informational advantages over the Justices and the Justices' difficulties in monitoring the clerks' behavior, clerk "shirking" may exist. When it comes to opinion drafting, however, the Justices encounter neither of these difficulties. The Justices have access to the same information as the clerks in that they have digested the briefs, attended oral arguments. engaged in conference discussions, and actively interacted with clerks during the drafting process. Justice Powell, for instance, typically used one clerk for drafting an opinion and a second clerk to act as an editor.⁸⁷ He wrote to his clerks that he engaged in "rewriting and editing as seems necessary. I may conclude that we must make a fresh start, or at least substantially rewrite portions of the opinion."88 Other Justices

^{84.} POSNER, supra note 9, at 156.

^{85.} More formally we refer to literature in law and political science on principalagency theory. See, e.g., Tracey E. George & Albert H. Yoon, The Federal Court System: A Principal—Agent Perspective, 47 ST. LOUIS U. L.J. 819 (2003); Gary J. Miller, The Political Evolution of Principal—Agent Models, 8 ANN. REV. POL. SCI. 203 (2005).

^{86.} See David R. Stras, *The Supreme Court's Gatekeepers: The Role of Law Clerks in the Certiorari Process*, 85 TEX. L. REV. 947, 995–96 (2007) (emphasizing the influence of law clerks upon petitions for certiorari); Ryan C. Black & Christina L. Boyd, Law Clerks Influence in the U.S. Supreme Court's Agenda Setting Process 3, 11 (Aug. 4, 2008) (unpublished manuscript), *available at* http://black.wustl.edu/webfiles/clerks/clerks-black-boyd.pdf.

^{87.} Powell, *supra*, note 29, at 11–12.

^{88.} Id. at 12.

use similar systems.⁸⁹ It is thus unlikely that clerks can, across many opinions and most of the Justices, manipulate opinions in ways of which their Justices are unaware.⁹⁰

That is, one problem with identifying clerks as the principal explanation for longer opinions is that it underestimates the role of Justices in the drafting process. If Justices preferred shorter opinions with fewer footnotes then it is entirely within their power to produce them. They can exert control over the final content of an opinion and edit out the clerks' verbosity. While such an effort may be time consuming, Justices can adopt measures that can help manage this difficulty, such as Justice Powell's instructions to his law clerks to avoid overly long and footnoted opinions.⁹¹ In short, clerks most likely do have preferences for longer opinions for precisely the reasons articulated by Posner;⁹² however, to the degree that clerks are the principal force behind increasingly longer opinions, a conclusion we ultimately reject, the Justices would be fully complicit in this outcome.

D. The Court's Institutional Development and the Length of Majority Opinions

Another way of thinking about the general increase in opinion length is that it results from the institutionalization of the Court over time. By institutional development, we mean the "development of a regularized system of policy making,"⁹³ which is the creation of standard operating procedures and the development of resources, authority, and legitimacy. In short, institutionalization refers to the development of the Court as an organizational unit and a legal and political force in the American polity. As is well known, the early Court had few resources, little legitimacy, and an unclear set of policymaking

^{89.} See generally PEPPERS, supra note 49, at 90, 93–94 (detailing the evolution of the use of law clerks by Supreme Court Justices). The differential usage of law clerks has observable consequences for the content of the Court's opinions. Justice Thurgood Marshall, for example, is known for exercising less oversight than other Justices. As a result, scholars have found more "fingerprints" from Marshall's law clerks on his draft opinions than the draft opinions of Justice Powell. See Paul J. Wahlbeck, James F. Spriggs II & Lee Sigelman, Ghostwriters on the Court?: A Stylistic Analysis of U.S. Supreme Court Opinion Drafts, 30 AM. POL. RES. 166, 178–79 (2002), available at http://apr.sagepub.com/cgi/content/abstract/30/2/166.

^{90.} It is, of course, possible that in particular cases clerks served to lengthen an opinion. Our purpose, however, is to analyze recurring or systematic patterns in the influence of law clerks on opinion length.

^{91.} Powell, *supra* note 29, at 20–21.

^{92.} See POSNER, supra note 9, at 145–57.

^{93.} McGuire, supra note 70, at 129.

HOUSTON LAW REVIEW

[45:3]

powers.⁹⁴ Today's Court, of course, has a well-entrenched set of decisionmaking rules, a high level of perceived legitimacy,⁹⁵ and vast power to set law and policy for the United States.

To examine the relationship between opinion length and institutional development, we first estimated a linear regression,⁹⁶ in which our dependent variable is the median length of the Court's opinion in a given year and independent variables are the level of the institutionalization of the Court in that same year and a one-year lag of the dependent variable.⁹⁷ To operationalize the Court's institutional development, we rely on a measure created by Kevin McGuire, who developed an index based on a series of variables that tap into the differentiation, durability, and autonomy of the Court, such as the amount of prior judicial experience of the Justices, the salary of the Justices, the Court's ability to control its own docket, the use of law clerks, and the amount of internal rules of the Court.⁹⁸

We expect a positive and statistically significant relationship between the development of the Court as an institution and the The equation median length of the Court's opinions. characterizing the relationship between these two variables is: Opinion Length (Median Number of Words) = 564.18 (Constant) + 159.19 (Institutionalization) + 0.707 (One Year Lag of Median Number of Words). The standard error on the Institutionalization independent variable is 57.32 and the coefficient is statistically significantly different from 0 at p < 0.01. This result implies that as the Court became more institutionalized over time it wrote longer opinions. For example, when the Court was at the 25th percentile of Institutionalization (a lower level of institutionalization) it produced opinions of about 1,678 words, whereas when it was at the 75th percentile of Institutionalization

^{94.} See, e.g., REHNQUIST, supra note 74, at 119–20 (likening the functioning of the early Supreme Court to the highest court of England, in that it seemed to be designed to resolve disputes between individual parties, as opposed to a "co-equal branch of a tripartite national government"); BERNARD SCHWARTZ, A HISTORY OF THE SUPREME COURT 15–16 (1993) (explaining that the early Supreme Court lacked the means even to secure for itself a suitable place to conduct its affairs).

^{95.} See James L. Gibson, Gregory A. Caldeira & Lester Kenyatta Spence, The Supreme Court and the U.S. Presidential Election of 2000: Wounds, Self-Inflicted or Otherwise?, 33 BRIT. J. POL. SCI. 535, 545 (2003) (concluding the Court's involvement in the 2000 presidential election did not greatly jeopardize the legitimacy of the Court).

^{96.} Linear regression, also commonly known as ordinary least squares (OLS), is a statistical technique that determines the degree of linear association between a dependent variable and a set of independent variables. For a discussion of OLS, see WILLIAM H. GREENE, ECONOMETRIC ANALYSIS ch. 6 (3d ed. 1997).

^{97.} The lagged value of the dependent variable is one basic approach to controlling for autocorrelation in time series data. *See* MCCLEARY & HAY, *supra* note 65, at 75.

^{98.} McGuire, *supra* note 70, at 130–32.

647

(a higher level of institutional development) its opinions averaged 2,392 words.⁹⁹

Even this result, however, rests on somewhat shaky footing because of the strong autocorrelation component in these data (that is, the strong time trends in the data).¹⁰⁰ Indeed, once we control for these time trends in a systematic way, there is not even much variation in median opinion length left for institutionalization to explain. In fact, the coefficient on *Institutionalization* is negative and statistically insignificant if we difference the data (meaning we are effectively explaining the amount of change in median length from time *t*-1 to time *t*) and use an ARIMA model.¹⁰¹

The upshot of this analysis of institutional development and opinion length is the following: once we control for the significant time trends in the data (that is, the fact that length generally increases over time), there is little left for other accounts, such as law clerks or even institutional development, to explain. One of the principal conclusions of our analysis is that clerks are not leading to the significant increase in opinion length that we observe. We should emphasize, however, that this does not mean institutional developments at the Court, including a whole variety of changes in the Court and its role, such as changes in the types of cases that appear on the Court's docket and differences in judicial philosophy and temperament over time, did not play a role in longer opinions. Since those changes over time are so closely aligned with calendar time itself, we cannot parse out their independent effect with any degree of certainty.

^{99.} We set the value of the lagged dependent variable at the median for observations in which *Institutionalization* took the value of interest. Specifically, we set it at 1,801 for the 25th percentile example and 2,356 for the 75th percentile example. One could alternatively estimate a linear regression in which the year under consideration is the only right-hand side covariate. Such an analysis indicates the Court has, on average, added an additional fourteen words (with a standard error of 0.92 words) to its majority opinions for each year between 1791 and 2005.

^{100.} For a discussion of autocorrelation, see GREENE, *supra* note 96, at 577–611 and MCCLEARY & HAY, *supra* note 65, at 66–79. Autocorrelation is defined as "serial correlation of the disturbances across periods" and results most often when potential independent variables that are omitted from a regression are correlated over time. GREENE, *supra* note 96, at 577. The result is that the error term from one time period then becomes correlated with the error term from other time periods (because the error term contains the missing independent variables).

^{101.} This is the same type of model we used for our clerk models as discussed above. See supra note 65.

HOUSTON LAW REVIEW

[45:3]

IV. THE DETERMINANTS OF CASE-LEVEL MAJORITY OPINION LENGTH

In the previous Part we sought to provide a bird's eye view of the dynamics of opinion length. We also offered an analysis that ultimately cast significant doubt upon one leading theory—the Justices' reliance on law clerks—for why opinion length has increased in recent years. Aggregating the output of the Court in this way provides the potential to understand the macro-level factors that shape opinion length. It is not without its disadvantages, however. Recall from the lower panel of Figure 2 that the interquartile range for opinion length in a given year is still sizeable. For example, while the median length of an opinion in 2005 was 4,425 words, the interquartile range was 2,751 words, which implies that roughly half of the opinions written in 2005 fell between 3,050 and 5,800 words. This is a large range and implies that the other half was either longer or shorter than this already expansive range.

This point receives even more support when one considers the impact of opinion-author identity and case-issue area as two factors with the potential to influence opinion length. Certain Justices, for instance, are well known for having particular writing styles and approaches—such as Justice O'Connor's¹⁰² and Breyer's¹⁰³ dislike of footnotes. Additionally, it is commonsensical that legally complicated or politically salient cases would generate longer opinions, and we should be more likely to observe such cases in some issue areas than in others.

Figures 5 and 6 provide an initial cut at addressing variation in opinion length across opinion authors and, within opinion author, by issue area. For each Justice, we display the average length of majority opinions authored by them in four separate issue areas (with the four symbols corresponding to the separate issue areas).¹⁰⁴ Figure 5 presents the average number of words in a majority opinion for each Justice/issue pairing¹⁰⁵ excluding footnotes, and Figure 6 presents the average number of words for each Justice/issue pairing for footnotes alone. For both figures,

^{102.} Syverud, supra note 30, at 1731.

^{103.} In Justice Breyer's Opinion, a Footnote Has No Place, supra note 31.

^{104.} We borrow this issue-area classification from Lee Epstein & Jeffrey A. Segal, *Measuring Issue Salience*, 44 AM. J. POL. SCI. 66, 70 (2000).

^{105.} There are some Justices with short tenures on the Court who wrote no opinions in a particular issue area and, as such, are missing symbols from their line. For example, Justice Goldberg, who served only during the 1962 through 1964 Terms, did not author a federalism opinion.

2008] SUPREME COURT OPINION LENGTH

the top line of each plot is the overall average across all majority opinion authors.

As both Figures 5 and 6 demonstrate, there is significant variation both across majority opinion authors, i.e., judicial "style," and even within an individual author across the different issue areas. Some Justices, for example, tend to write opinions that are approximately equal in length across all four issue areas (e.g., Justices Black, Clark, and White). For others, by contrast, length is highly dependent upon the issue area. Note the considerable variation in Justice Kennedy's average opinion length, which ranges from as low as 3,700 words for a judicial power opinion¹⁰⁶ to as high as 7,000 words for a federalism opinion. Justice Souter also manifests a wide range in opinion length across issue areas. His cases in the area of judicial power averaged 3,851 words while his cases in federalism averaged 5,755 words.

Moving to Figure 6 we see roughly similar patterns in the average length of majority opinion footnotes. Notably, however, there are fewer Justices for whom issue area does not influence the length of footnotes in their opinions. With the exceptions of Justice Breyer, who universally rejects footnotes,¹⁰⁷ and Justice Clark, most Justices' usage of footnotes depends upon the case's issue area, though there is variation in an issue area's impact by Justice (compare, for example, Justice Stewart's issue ordering with Chief Justice Warren's). In addition, Justice O'Connor's use of footnotes appears generally to accord with what others have said about her writing style.¹⁰⁸ One can see, according to our data, that her use of footnotes (but not use of nonfootnote words) is substantially below the mean footnote length.¹⁰⁹ One should also observe that Justice O'Connor is not without company. as a number of other Justices, both past and current, also shy away from using footnotes. For example, compare Justice O'Connor's usage of footnotes as depicted in Figure 6 with those of Justices Black, Breyer, Kennedy, Scalia, and Thomas.

^{106.} Judicial power cases involve, for example, judicial supervision of lower courts, comity, and the like. *See* HAROLD J. SPAETH, UNITED STATES SUPREME COURT JUDICIAL DATABASE, 1953–97 TERMS 57, 64–66 (1998).

^{107.} In Justice Breyer's Opinion, a Footnote Has No Place, supra note 31.

^{108.} See Syverud, supra note 30, at 1731–33.

^{109.} Justice O'Connor's majority opinions contained an average of 474 footnote words, while the average number of footnote words for opinions by all authors was 1,811. This difference is statistically significant at $p \cdot .001$.

HOUSTON LAW REVIEW

[45:3]

Majority Opinion Text Length by Issue Area

1													
Average –			At a			₩0-<	>				- o C	ivil Libe	rties
Black -			< ¥ ⊖-									udicial F	cs Power
Blackmun –						· Ed -	🛪	∋			○ F	ederalis	m
Brennan –						€££)				-		
Breyer –							¥⊖ ·						
Burger –					@	↔	*						
Burton –			·	>-⊡-≯	÷								
Clark -				*0									
Douglas -		@E	₩>										
Fortas -					🕀 -								
Frankfurter –				<u>}</u>	- * 6)							
Ginsburg -)-@:	₩					
Goldberg -							*						
Harlan –					B*-	· - @							
Jackson -			-≪>-										
Kennedy -							E		0-				
Marshall –					80	€*							
Minton -		Θ-₩-<	>										
O'Connor -								œ •	*		>		
Powell -)							
Reed -		>-⊡	· (O		- *								
Rehnquist -						¥⊙							
Scalia -						0KE]		>				
Souter -									*	<	->		
Stevens -						*	-0<	>					
Stewart -				(-)E	₩	<u>-</u>							
Thomas -						()							
Warren -					*	····							
White -						- TEX							
Whittaker -				- (-)	*			· (->					
					×15:			~					
2	1000	1500		0500	0.000	1	1	1500	1	5500	0000	1	7000
	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000
					N	vlean Ni	mber of	Words					

Figure 5: Dot plot of mean majority opinion text, excluding footnotes, by author and issue area combination, 1953 to 2004. Issue averages are reported at the top of the figure. Opinion length data come from the authors. See caption to Figure 1, supra, for information on where we obtained these data. We take our definition of issue area from Epstein & Segal, supra note 104, at 70, and exclude seventeen cases that are defined as being miscellaneous. These data are taken from Spaeth, supra note 119, at 68–69, using only signed orally argued opinions (N=5,382).

Average	f					[-](*				o	<u>C</u> ivil Lit	perties
Black	-		-86	₩Θ								Econor	nics
Blackmun	+])		···· 6	Federa	lism
Brennan	+						÷	·	\$*		L		
Breyer	+	- 🕸											
Burger	+				8-6)	*-∽-						
Burton	+						3- *	<u></u>					
Clark	+												
Douglas	+		(¥	Ô								
Fortas	+					-E						<u>-</u>	
Frankfurter	+			Ѐ	₩								
Ginsburg	+			·		(D)	K						
Goldberg	+						*						
Harlan	+					B							
Jackson	+								K				·
Kennedv	+						· ·						
Marshall	+	~ +					7						
Minton	+												
O'Connor	4		69-	F>	K								
Powell	+							F	O		* 6	>	
Reed	+				F			*					
Behnquist	+												
Scalia	4				(A)								
Souter	1]	*					
Stevens	1							/N/		¥-	(1-8)		
Stewart	1									\sim			
Thomas	1		F	1AK				/p		~			
Warron	1						¥	. .					
White	1			· · · ·			小 戸-	and the					
Whittaker	+			🖯	⊖	- *							
	Ļ	1 1		1	-1	1	1	U.	1	1	1	1	1
		0 25	0 !	500	750	1000	1250	1500	1750	2000	2250	2500	2750
						M	ean Numi	ber of Wo	ords				

Majority Opinion Footnote Length by Issue Area

Figure 6: Dot plot of mean footnote length by author and issue area combination. See caption to Figure 5 for details about the data used in constructing this figure.

While figures such as the previous two are informative and interesting, they are but a first step at a more individually focused analysis. Indeed, available data and methods permit a more thorough and rigorous examination of the determinants of the length of a majority opinion. To gain leverage on this variation, we shift our unit of analysis to the individual opinion and focus on a subset of the data, the decisions of the Burger Court, which span the 1969 through 1985 Terms. While this smaller time period does limit some of our generalizability, it allows us to see how factors relating to the internal dynamics among the Justices and case-specific factors alter the length of the Court's written work. A focus on individual opinions shows that most commentators' preoccupation with increases in length over time, while appropriate, misses interesting elements of the opinion length story.

HOUSTON LAW REVIEW

A. Hypotheses and Measures

Researchers generally characterize the opinion writing process on the Court as a "collegial game,"¹¹⁰ in which the Justices pursue legal and policy goals within strategic and contextual constraints imposed by norms and rules operating on the Court.¹¹¹ By strategic constraints, these scholars mean situations in which one Justice's decision depends in part on the preferences and choices of other Justices on the Court.¹¹² Maltzman, Spriggs, and Wahlbeck refer to this idea as the "Collective Decision-Making Postulate," which maintains that "Justices will try to secure opinions that are as close as possible to their policy positions by basing their decisions in part on the positions and actions of their colleagues."¹¹³ This strategic view of Court decisionmaking suggests Court opinions result in part from the interaction of the Justices as they bargain and negotiate to an outcome. As Chief Justice Rehnquist described it: "Judging inevitably has a large individual component in it, but the individual contribution of a good judge is filtered through the deliberative process of the court as a body, with all that this implies."¹¹⁴ The Chief Justice further noted that as a result. "give and take is inevitable, and doctrinal purity may be muddied in the process."¹¹⁵

For example, in order for an opinion to set binding precedent it generally must be supported by at least five of the nine sitting Justices. This rule leads majority opinion authors to recognize that, under some conditions, it will be necessary to bargain and compromise in order to gain the votes necessary for a majority. Justice Powell's office manual explained to his law clerks that after he circulated a majority opinion draft: "You then wait anxiously to see what reaction this initial draft will prompt from other Justices. Subsequent drafts may be sent around to reflect

[45:3]

^{110.} FORREST MALTZMAN, JAMES F. SPRIGGS II & PAUL J. WAHLBECK, CRAFTING LAW ON THE SUPREME COURT: THE COLLEGIAL GAME 8 (2000).

^{111.} See LEE EPSTEIN & JACK KNIGHT, THE CHOICES JUSTICES MAKE 10–12, 17 (1998) (positing justices seek to advance their own policy goals but are constrained by both their expectations about the actions of the other justices and the Court's institutional norms).

^{112.} MALTZMAN ET AL., *supra* note 110, at 18 (hypothesizing justices are "constrained by the concurrent actions" of their colleagues); EPSTEIN & KNIGHT, *supra* note 111, at 10 (applying the rational choice paradigm to judicial decisionmaking to explain justices' choices as strategic behavior).

^{113.} MALTZMAN ET AL., supra note 110, at 17.

^{114.} William H. Rehnquist, *Remarks on the Process of Judging*, 49 WASH. & LEE L. REV. 263, 270 (1992).

^{115.} Id.

stylistic revisions, citechecking changes, or accommodations made in the hope of obtaining the support of other Justices."¹¹⁶ Justice Brennan agreed, writing: "Before everyone has finally made up his mind [there is] a constant interchange among us...while we hammer out the final form of the opinion."¹¹⁷ Maltzman et al. show that bargaining and negotiating on the Court influence, among other behavior, the formation of opinion coalitions. For instance, they conclude Justices are substantially *less* likely to join the majority opinion draft if other Justices are currently bargaining with the majority opinion draft once a majority opinion coalition has formed.¹¹⁸

This perspective leads us to hypothesize that variables relating to collegial interaction—ideological factors and bargaining among the Justices—as well as contextual factors at the Justice- and case-level will influence the length of a majority opinion.

1. Collegial Interaction. Due to the collective nature of decisionmaking on the Court, we expect factors relating to the ideological makeup and size of the majority-conference coalition,¹¹⁹ as well as the interactions between the Justices in that coalition and the opinion author, will ultimately impact the length of an opinion. First, the amount of ideological agreement between the opinion author and the remaining members of the majority-conference coalition is likely to influence opinion length. As the gap between the author and the majority coalition increases, we expect that the opinion author has to go to greater argumentative lengths to accommodate her colleagues and keep their votes. We operationalize Opinion Author Distance from Majority Coalition as the absolute value of the difference between the opinion author's issue-specific ideology score and the mean issue-specific ideology score of the members in the majority-conference coalition. We determine the issue-specific

^{116.} David Boyd, Justice Powell's Office Manual 6 (1975) (unpublished archival material, on file with the Houston Law Review).

^{117.} William J. Brennan, Jr., State Court Decisions and the Supreme Court, PA. B. Ass'N Q., Oct. 1959–June 1960, at 393, 405.

^{118.} See MALTZMAN ET AL., supra note 110, at 143–44. Bargaining, or "signaling," includes, among other things, suggestions and concerns submitted by a Justice to the majority opinion author. *Id.* at 134. A majority opinion coalition forms when an author has at least four other votes for the opinion draft. *Id.* at 128.

^{119.} The conference vote occurs shortly after the Court hears oral argument in a case and is each Justice's initial vote in a case. A Justice is free to change his or her conference vote. *See* REHNQUIST, *supra* note 74, at 295 (noting vote changes during the conference are rare).

HOUSTON LAW REVIEW

[45:3]

ideology score for each Justice by calculating the percentage of the time he or she voted liberally over his or her entire career on the Court¹²⁰ in each of Spaeth's twelve substantive value areas.¹²¹

Second, from the perspective of the opinion author, the size and ideological heterogeneity of the majority-conference coalition might require additional maneuvering and nuance within an opinion, both of which would tend to increase its overall length. In particular, a smaller coalition leaves fewer votes the opinion author can stand to lose. As a result, opinion authors must be more accommodating of their colleagues or risk losing the majority. According to Chief Justice Rehnquist:

The willingness to accommodate on the part of the author of the opinion is often directly proportional to the number of votes supporting the majority result at conference; if there were only five justices at conference voting to affirm the decision of the lower court, and one of those five wishes significant changes to be made in the draft, the opinion writer is under considerable pressure to work out something that will satisfy the critic, in order to obtain five votes for the opinion.¹²²

Unless otherwise noted, all of our data come from MALTZMAN ET AL., supra note 120. 110. These scholars used circulation records maintained by Justice Brennan to capture the interaction of the Justices during the writing of a case. In these records, Brennan, for each case, recorded each piece of paper that came through his office (e.g., opinion drafts, Justices' joining of opinions, majority and separate opinion drafts, attempts to bargain with the author, etc.), the date on which the memo was circulated, and the substantive content of the memo. Id. at 45, 168. Maltzman et al. also extensively relied on the papers of other retired Justices (Douglas, Marshall, and Powell) to fill in any missing gaps in Justice Brennan's records. Id. at 155. These data provide a clear window into the decisionmaking process on the Court, permitting us to gain powerful empirical referents for collegial interaction. Moreover, these data are both reliable and valid. See Forrest Maltzman & Paul J. Wahlbeck, Inside the U.S. Supreme Court: The Reliability of the Justices' Conference Records, 58 J. POLITICS 528, 531-34 (1996) (using statistical analysis to gauge the reliability and accuracy of the Justices' conference notes); see also MALTZMAN ET AL., supra note 110, at 155-68 (reproducing the work of Maltzman & Wahlbeck, supra, on conference notes and expanding the analysis to Justice Brennan's circulation records). While Maltzman et al. recognize that, at times, their evidence may underreport the level of bargaining on the Court (e.g., if two Justices confer and do not follow the conversation up with a written memo), they nonetheless conclude the data are broadly representative of the interaction that transpires during the opinion drafting process. Id. at 166-67.

^{121.} SPAETH, *supra* note 106, at 68. The issue areas appear in his "VALUE" variable and include criminal procedure, civil rights, first amendment, due process, privacy, attorneys, unions, economic activity, judicial power, federalism, interstate relations, and federal taxation. We did not include any cases in our analysis for which Spaeth coded the issue area as "miscellaneous" because such cases do not have any clear ideological direction to their outcomes. We thus would not be able to construct a measure for each Justice's issue-based ideology.

^{122.} Rehnquist, supra note 74, at 302.

Similarly, an ideological grab bag of Justices is a far more difficult audience to write for than a coalition comprised of Justices whose positions are more closely aligned. This added difficulty, we suggest, will result in longer opinions.

To measure the majority-conference coalition size, we created a set of mutually exclusive and exhaustive dummy variables to represent the size of the conference majority: Minimum Winning Conference Coalition (four or fewer Justices voted with the author at conference) and Unanimous Conference Coalition (e.g., 9–0 or 8–0).¹²³ The omitted referent category is a majority-conference coalition that is non-unanimous and nonminimum winning. We capture the ideological heterogeneity of those Justices voting with the majority at conference, Majority Conference Coalition Heterogeneity, using the issue-specific liberalism scores discussed above.¹²⁴ We operationalize it as the standard deviation of the issue-specific voting scores for the Justices voting with the majority at conference (excluding the author from this calculation). Larger values indicate more ideological diversity and a value of zero means all of the Justices are completely identical.

We also examine direct interactions between members of the majority- and minority-conference coalitions and the majority opinion author. Our expectation is that as the amount of bargaining between Justices and the author increases, the opinion author will have to go to greater lengths to accommodate her colleagues. This is especially true for members of the majority-conference coalition, whose votes the author needs to forge a majority. This is not to suggest all interactions necessarily have the effect of lengthening an opinion, but that on average, bargaining will lead to more language. We code Bargaining by Conference Majority as the number of bargaining memoranda sent from members of the majority-conference coalition to the majority opinion author during the opinion writing process; we code Bargaining by Conference Minority as the number of such memos coming from members of the minority-conference coalition.¹²⁵

^{123.} These data come from MALTZMAN ET AL., *supra* note 110, at 26, who obtained them from Justice Brennan's papers.

^{124.} See supra note 121 and accompanying text.

^{125.} We include four types of bargaining tactics identified by MALTZMAN ET AL., *supra* note 110, at 62–69: (1) suggestions or memos that ask for specific changes to the majority opinion; (2) threats or suggestions coupled with an explicit statement that the Justice will not join unless he or she is accommodated; (3) statements that a Justice "will wait," which indicates that a Justice is currently unwilling to join the majority opinion but does not articulate a specific concern; and (4) circulation of first drafts of separate

HOUSTON LAW REVIEW

[45:3]

2. Contextual Influences. At the individual Justice level, a long line of research suggests the behavior of newly appointed Justices is distinct from that of their more senior colleagues, as evidenced by less stable voting patterns, more moderate voting, and the avoidance of conflict.¹²⁶ Justices who are authoring their first handful of opinions seem more likely to spend an especially long time agonizing over the language and argumentation contained therein. This substantial amount of editing, we suggest, will produce opinions of shorter length than those written by their more experienced colleagues. To operationalize this measure, we follow common practice in the literature and code *Freshman Author* as 1 during the first two Terms the Justice is on the bench.¹²⁷

At the other end of the spectrum, Justices who have significant experience in dealing with a particular issue area before the Court are also likely to author opinions that differ from those Justices who are less familiar with an issue area. In particular, a greater familiarity with the issues at hand should lend itself to the ability to more succinctly advance a successful argument. As such, we expect shorter opinions from experts than nonexperts. We measure *Opinion Author Expertise* using a standard approach in the literature, as the issue-specific opinion ratio (OR) for the author of each majority opinion. The OR is the number of cases in which a Justice wrote a dissent or concurrence in an issue area divided by the number of cases in that issue area decided by the Court since that Justice's appointment and up to the Term preceding the decision of the case in question.¹²⁸ We measure *Opinion Author Expertise* as a z-

opinions. Our measure excludes one of their bargaining tactics—statements that a Justice will write a separate opinion—because in the aggregate (the case level) it is highly correlated with the actual writing of a first draft of a separate opinion and thus does not provide independent information.

^{126.} See Timothy M. Hagle, "Freshman Effects" for Supreme Court Justices, 37 AM. J. POL. SCI. 1142, 1147–50 (1993) (examining the "acclimation effects" experienced by newly-appointed Justices); J. Woodford Howard, Jr., On the Fluidity of Judicial Choice, 62 AM. POL. SCI. REV. 43, 45–46 (1968) (explaining the "freshman effect" is a period of voting instability exhibited by newly appointed Justices); Mark S. Hurwitz & Joseph V. Stefko, Acclimation and Attitudes: "Newcomer" Justices and Precedent Conformance on the Supreme Court, 57 POL. RES. Q. 121, 127–28 (2004) (finding tenure length substantially affects adherence to stare decisis); Walker et al., supra note 46, at 373–74 ("High levels of inexperience may... provide conditions conducive to breakdown in decision-making norms.").

^{127.} See, e.g., MALTZMAN, ET AL., supra note 110, at 44 (using 1 to indicate a Justice with less than two full years of experience); Hagle, supra note 126, at 1143–46 (using the voting record of Justices late in their careers as a control against voting behavior early in their careers).

^{128.} Maltzman et al. assigned each Justice a unique OR for each of 133 narrow issue

score, which compares the Justice's OR with the mean OR for all Justices serving on the Court divided by the standard deviation of OR among that set of Justices. Larger values on this variable denote an opinion author has more expertise than the average Justice on the Court, while lower scores indicate the author has, on average, less expertise than other Justices.

Our final Justice-specific factor captures workload constraints on the Court. Opinion authors with heavier workloads, in terms of the number of opinions they are currently authoring, may face greater time pressures and thus write shorter opinions. The measure of each Justice's workload (*Opinion Author Workload*) is the number of majority and separate opinions on which he or she was working on the day the first draft of the majority opinion was circulated to the conference.¹²⁹

Case-specific characteristics should matter as well. Instances in which the Court takes the (relatively) extraordinary action of striking down a law as unconstitutional or overruling one of its own precedents should require additional argumentation on the part of the opinion author. We code *Opinion Strikes Law as Unconstitutional* and *Opinion Overrules Precedent* as dummy variables that take on a value of 1 if the Court strikes down a law as unconstitutional or overrules one of its precedents, respectively. We collect data for the former variable from Spaeth¹³⁰ and the latter from *Shepard's Citations*.¹³¹

Previous research has also informed scholars that not all cases are viewed by the Justices as being equally important. We suspect this has potential implications for the length of the Court's opinions. In particular, more salient or complex cases

areas identified by Spaeth, relying upon the 263 issue categories that Spaeth identified and then grouped those issues that Spaeth reported as being related. MALTZMAN ET AL., *supra* note 110, at 43 n.15, 44; *see also* SPAETH, *supra* note 106, at 56–57. For example, Maltzman et al. grouped together "the five specific issue areas that Spaeth identified as related to federal transportation regulation," which included railroad, boat, truck, pipeline, and airline. MALTZMAN ET AL., *supra* note 110, at 43 n.15.

^{129.} We draw these data from MALTZMAN ET AL., *supra* note 110, at 26, who derived the data from Justice Brennan's circulation records, where he kept a list of all majority opinion drafts (and dates of circulation) circulated in each case.

^{130.} See SPAETH, supra note 106, at 79-80.

^{131.} Shepard's Citations states that precedent is overruled when "[t]he citing case expressly overrules or disapproves all or part of the cited case." See Shepard's Product Guide, Shepard's Analysis Definitions, http://www.lexis.com (last visited Sept. 5, 2008) [hereinafter Shepard's Product Guide] (sign into LexisNexis; follow "Research" hyperlink; then follow "LexisNexis® Information & Training" hyperlink; then follow "Product Guide—SHEPARD'S Citations" hyperlink; then follow "View an Alphabetical List of All SHEPARD's Analysis Definitions"). Hansford and Spriggs explain that Shepard's coding of the overruling of precedent is quite good and satisfies the exacting standards of social science. HANSFORD & SPRIGGS, supra note 5, at 338.

HOUSTON LAW REVIEW

[45:3]

should produce longer opinions than their less salient or less complex counterparts. We adopt the most commonly used measure of *Case Salience* in the literature,¹³² which is based on the number of amicus curiae briefs filed for a case at the merits stage.¹³³ Because the number of filings increases over time, we utilize a year-based z-score, which captures how many standard deviations the filings in a given case are from the number of filings in all other cases decided in that same year.¹³⁴ We also code *Case Complexity*, for which we follow the now standard approach in the literature¹³⁵ and use exploratory-factor analysis¹³⁶ to produce a single-factor score for each case. The input to the factor analysis includes the number of legal issues and the number of statutes or laws under review in the case.¹³⁷

On the level of institutional factors we also control for the amount of time remaining between the date of the opinion assignment and the end of the Court's Term (defined conservatively as July 1). The norm on the Court is for the Justices to have all opinions released before they adjourn for the summer. Workload constraints on the Court are well known, as Justice Powell noted to his clerks: "As we move deeper into the Term, say from and after February, the number of opinions

^{132.} See, e.g., MALTZMAN ET AL., supra note 110, at 45–46 (basing the measure on the number of amicus briefs filed). But see Johnson et al., supra note 32, at 495 (basing the measure on whether the case was reported on the front page of the New York Times the day after it was decided).

^{133.} We do not use the other common measure employed by Johnson et al. above because it is an ex post measure, occurring after a case is written. Length could thus be endogenous to its being reported in the newspaper. *See* Epstein & Segal, *supra* note 104, at 72 (introducing *New York Times* coverage as a new measure of Case Salience).

^{134.} We measure it as: [(the number of briefs filed in a case – the average number of briefs filed in all cases in a Term) / the standard deviation on the number of briefs filed in a Term]. For a discussion of the use of z-scores, see WILLIAM L. HAYS, STATISTICS 166–69 (3d ed. 1981).

^{135.} See MALTZMAN ET AL., *supra* note 110, at 46–47 (measuring complexity with indicators for the number of legal issues, the number of legal provisions, and the number of opinions in a case); Johnson et al., *supra* note 32, at 494–95 (using factor analysis to count the number of legal issues and legal provisions in a given opinion).

^{136.} Factor analysis, as used in this context, is a data reduction technique that uses the correlation among two or more observed variables of interest to produce a single variable, which is assumed to be a latent unobservable quantity and a linear function of the observed (or manifest) variables. *See* JAE-ON KIM & CHARLES W. MUELLER, INTRODUCTION TO FACTOR ANALYSIS: WHAT IT IS AND HOW TO DO IT (1978). In our case, we use factor analysis to model case complexity as an unobservable variable with manifestations in number of legal provisions and number of issues involved in a given case.

^{137.} We drew these data from SPAETH, *supra* note 106, at 42–50, 56–68 (explaining the "LAW" and "ISSUE" variables). We used his "LAW" variable to determine the number of constitutional provisions, statutes, or court rules at issue in a case; we used his "ISSUE" variable to count the number of different legal issues in a decision.

circulated by each Chambers multiplies, and the problem of keeping abreast is a serious one."¹³⁸ Opinion authors receiving their assignments later in the Term should produce opinions that are shorter than their colleagues' opinions assigned earlier in the Term. We measure this variable as the number of days from the day the opinion was assigned until July 1. Larger values therefore indicate an opinion was assigned earlier in the Term and thus should be associated with longer opinions.

We also include dummy variables to control for the type of issue being addressed by an opinion and the nature of interpretation invoked by the Court. We include a variable coded 1 if the Court uses constitutional interpretation as (Constitutional Interpretation) and another coded as 1 if the opinion involves civil liberties (Civil Liberties Issue).¹³⁹ Each variable is otherwise coded as zero, and all other cases serve as the referent category. We take these data from Spaeth.¹⁴⁰ We expect constitutional opinions will be shorter than other opinions. Judge Wald, for instance, notes cases of statutory interpretation often lead judges to write longer opinions.¹⁴¹ We are agnostic on whether civil liberties opinions will be shorter or longer than opinions written in other issue areas.

Finally, we control for whether the case was issued per curiam, and we code *Per Curiam Opinion* as 1 if it was designated as such by the Court. We also include a variable coded as 1 if the opinion contained one or more appendices. Our method of counting words did not remove appendices from the opinions,¹⁴² and this variable therefore controls for the tendency of opinions with appendices to contain a larger number of words. While we do not report the coefficients in Table 1, we do include fixed effects for each of the Justices, excluding Chief Justice Burger, to serve as the baseline.¹⁴³

^{138.} Powell, *supra* note 29, at 19.

^{139.} We follow SEGAL & SPAETH, *supra* note 32, at 322–23, and code a case as involving civil liberties if it deals with criminal procedure, civil rights, first amendment, due process, privacy, or attorneys. We use the Spaeth value codes to code the cases. For an explanation of the Spaeth value codes, see *supra* note 121 and accompanying text.

^{140.} One should note that these two variables are potentially endogenous with length, in the sense that they are also aspects of the final written opinion. We nevertheless include them because length is likely to vary across these variables. In this sense, they are descriptive variables and not necessarily causally prior to length.

^{141.} See Wald, *supra* note 12, at 1408 (explaining statutes must often be placed in context and thus require that more "non-essential material" is added to an opinion).

^{142.} This approach was ultimately necessary as the Court's placement of appendices in its opinions varies dramatically across its history. As such, the script we wrote could not reliably parse out appendices from the majority opinion.

^{143.} These results are available upon request from the Authors. We also checked to

HOUSTON LAW REVIEW

[45:3]

B. Data and Methods

We analyze the 2,274 cases decided by the Supreme Court between the 1969 and 1985 Terms in which a signed or per curiam opinion was released.¹⁴⁴ The dependent variable is *Total Majority Opinion Length*, which is measured as the number of words in both the main text and footnotes of the majority opinion.¹⁴⁵ This variable has a mean of 4,920 words with a standard deviation of 2,682 words and ranges between 10 words in the shortest opinion and 30,760 words in the longest opinion. Because our dependent variable is a count variable, we estimate a negative binomial regression model¹⁴⁶ with robust standard errors.¹⁴⁷

146. Researchers with a count-based dependent variable have a large arsenal of models at their potential disposal. *See generally* J. SCOTT LONG, REGRESSION MODELS FOR CATEGORICAL AND LIMITED DEPENDENT VARIABLES 217–50 (1997) (discussing regression models used for count outcomes); J. SCOTT LONG & JEREMY FREESE, REGRESSION MODELS FOR CATEGORICAL DEPENDENT VARIABLES USING STATA 349–414 (2006) (detailing various models that can be used to analyze count variables). We do not estimate a Poisson model because we have theoretical reasons to believe the assumption of independent events is not valid. That is, given that an opinion contains a single word, the likelihood that another word will be used will increase. In other words, there is positive contagion in the dependent variable. Estimation of a zero-inflated or hurdle model is inappropriate, of course, because we have only nonzero values in our data.

147. Robust standard errors, also known as heteroskedastic-consistent standard errors or the Huber-White sandwich estimator, permit the relaxation of the independence assumption across observations in a data set. It can produce "correct" standard errors even if observations are correlated. See Halbert White, A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity, 48 ECONOMETRICA 817, 817–18 (1980).

ensure our results were robust to the inclusion of fixed effects for each Term, and this supplementary analysis indicates our results are largely invariant to the inclusion of those additional control variables.

^{144.} This list was drawn from SPAETH, *supra* note 106.

^{145.} We consider only majority opinions primarily for the substantive reason that it is ultimately what constitutes the law of the land. Notably absent from our independent variables is any measure of the length of separate opinions. One could reasonably argue the longer the separate opinions are, the longer the majority text will be. Of course, the relationship between these two quantities is ultimately endogenous and presents, in methodological terms, a system of equations to be estimated. Our ability to estimate this system requires the identification of an instrumental variable that is highly correlated with majority opinion length but is orthogonal—i.e., entirely unrelated—to separate opinion length. We were unable to identify such a variable. For the same reasons, we ultimately pooled together majority text and majority footnotes.

Table 1: Negative Binomial Regression of the Number of Words in Majority Opinions of the U.S. Supreme Court (1969–1985 Terms)

Variable	Coefficient	Robust Standard Error
Collegial Interaction Opinion Author Distance from Majority Coalition	0.002	0.001
Majority Conference Coalition Heterogeneity	0.002	0.002
Unanimous Conference Coalition	-0.058*	0.029
Minimum Winning Conference Coalition	0.058*	0.027
Bargaining by Conference Majority	0.028*	0.006
Bargaining by Conference Minority	0.022*	0.011
Contextual Influences Freshman Opinion Author	-0.071	0.042
Opinion Author Expertise	0.000	0.012
Opinion Author Workload	0.008*	0.003
Opinion Strikes Law as Unconstitutional	0.011	0.017
Opinion Overrules Precedent	0.249*	0.062
Case Salience	0.028*	0.003
Case Complexity	0.062^{*}	0.010
Time Until End of Term	0.0004^{*}	0.0001
Civil Liberties Issue	-0.065	0.035
Constitutional Interpretation	-0.087*	0.024
Opinion Contains Appendix	0.479^{*}	0.059
Per Curiam Opinion	-1.783*	0.145
Constant	8.087*	0.065
[Justice fixed effect	s omitted]	
Alpha	0.211	0.009
Number of Observations	2,2	74
<i>Note:</i> * denotes p < 0.05 (two-tailed test	st)	

HOUSTON LAW REVIEW

C. Results

1. Collegial Interaction. We present the parameter estimates for this model in Table 1. We begin with the variables related to collegial interaction among the Justices. We include two variables to tap the ideological relationships among the Justices in a case, one considering the ideological distance between the author and the conference majority on whose behalf she was writing, and the other capturing the ideological heterogeneity of the conference majority. The statistical results provide no support for either variable.

When we turn to variables measuring the strategic context of a case, the results are much crisper. We argue that when authors write on behalf of smaller conference majorities, and thus face stronger incentives to accommodate their colleagues, they will write longer majority opinions. The data support this idea. We present the substantive effect¹⁴⁸ of these variables as a dot plot in Figure 7. If an author is writing for a minimum winning coalition (far right), the expected length is 3,927 words.¹⁴⁹ Holding all other variables constant,¹⁵⁰ this is significantly longer than the expected length for both other types of conference vote coalitions. Indeed, our baseline coalition, one that is neither unanimous nor minimum winning,¹⁵¹ has an expected length of 3,705 words [3,414, 3,996] (95% confidence interval). Finally, its unanimous counterpart has only 3,495

662

^{148.} Examining the statistical significance or nonsignificance of a variable as reported by a table is only the first step to making sense of results. Especially for nonlinear models such as a negative binomial regression model, one cannot make immediate sense of how much of an effect an independent variable has on the dependent variable. This is to say that statistical significance is a necessary but not sufficient condition for a variable to be substantively significant. See Lee Epstein et al., On the Effective Communication of the Results of Empirical Studies, Part II, 60 VAND. L. REV. 801, 835, 840 (2007).

^{149.} The 95% confidence interval, depicted in the figure, extends from 3,592 to 4,262 words.

^{150.} Unless otherwise noted, for our substantive calculations we hold all other variables at their median values. These are: Opinion Author Distance = 12.79; Majority Conference Heterogeneity = 13.12; Non-unanimous and non-minimum winning conference vote; Majority Bargaining = 2; Minority Bargaining = 1; Non-Freshman Author, Author Expertise = -0.17; Workload = 9; case neither strikes down law as unconstitutional nor overrules the Court's precedent, Case Salience = 0.37; Case Complexity = -0.53; opinion is assigned 160 days before July 1; the case is a civil liberties case but not decided as a matter of constitutional interpretation; the case has no appendix and is not a per curiam; and Justice Burger authored the majority opinion. Our calculations were made using the SPost series of command in Stata 10 as implemented by LONG & FREESE, *supra* note 146, at 9.

^{151.} The modal value in the baseline category is for a conference vote that is one vote shy of being unanimous (e.g., on a full Court, 8–1, on an eight-member Court, 7–1, etc.).

words [3,172, 3,817] (95% confidence interval). All differences in length across each pair of conference-coalition votes are statistically significant.¹⁵²



Figure 7: Dot plot of expected opinion length conditional on different values of conference coalition vote. All other variables are held at their median values, supra note 205. The black dot represents the mean prediction and the "whiskers" are 95% confidence intervals. Overlapping confidence intervals do not necessarily indicate a lack of difference between two quantities, supra note 137.

In addition, a greater level of bargaining by members of either the majority- or minority-conference coalition leads to

^{152.} While the confidence intervals in Figure 7 and several of our other figures overlap, this does not necessarily mean there is no statistically significant difference across those quantities. The key quantity of interest, the difference between the two values, has a separate distribution with a mean and confidence interval around it. See Lee Epstein et al., On the Effective Communication of the Results of Empirical Studies, Part I, 59 VAND. L. REV. 1811, 1832–33, 1835 (2006); see also Peter C. Austin & Janet E. Hux, A Brief Note on Overlapping Confidence Intervals, 36 J. VASCULAR SURGERY 194, 194 (2002).

HOUSTON LAW REVIEW

[45:3]

longer majority opinions. The number of bargaining memoranda from members of the conference majority ranges from 0 to 11 in these cases, and the number of minority bargaining memoranda ranges from 0 to 7. Figure 8 presents the substantive effect of these two variables. An increase from zero to one memorandum from within the majority coalition results in roughly a 100-word increase. The same one-unit change in a minority-coalition memo results in a more modest increase of around eighty-one words.¹⁵³ If we consider a bigger shift in the level of bargaining from majority-conference coalition members in a case (from the 10th to 90th percentile in the number of bargaining statements received by the author), we see a correspondingly large increase in the number of words in the majority opinion, from 3,503 to 3,919, which is a 12% change in opinion length.¹⁵⁴



Figure 8: Line graphs of expected opinion length conditional on majority (left panel) and minority (right panel) bargaining. All other variables are held at their median values. See supra note 205. The solid line represents the mean prediction, and the dotted lines are 95% confidence intervals.

2. Contextual Influences. Additionally, we put forward a number of hypotheses regarding contextual factors, both for case-level and Justice-level characteristics. Our results suggest

^{153.} The 95% confidence intervals on these changes are $[57,\ 143]$ and $[6,\ 157],$ respectively.

^{154.} The mean difference is 416 words with a 95% confidence interval of [229, 603].

2008] SUPREME COURT OPINION LENGTH

opinion length is largely unrelated to Justice-level factors,¹⁵⁵ including their freshman status and issue area expertise. Paradoxically, we do find workload is related to length, but in a manner that is opposite to what we predict. That is, the larger the number of drafts a Justice has pending in other cases, the longer the opinion in a particular case will be. The ultimate size of the substantive effect for this variable is relatively modest. A one-opinion increase in pending drafts above the median value only results in extending a given majority opinion by twenty-nine words.¹⁵⁶ This result also conflicts with our finding that time until the end of a Term matters. As we predict, the more time a Justice has to author an opinion, the longer the opinion tends to be, though this substantive effect is rather modest as well. As compared to a case with the average amount of time, a case with one standard deviation above the average contains an estimated 113-word increase in the length of the majority opinion.¹⁵⁷

Turning next to case-level factors, we consider the role of case salience and case complexity. Both of these variables perform as expected in that more salient and more complex cases result in longer opinions. Figure 9 displays the substantive effect of these variables. Starting with a case in the 5th percentile of salience, the expected length is 3,586 words. Moving to a case in the 95th percentile of salience, the expected length is case in the 95th percentile of salience, the expected length is 3,586 words. Moving to a case in the 95th percentile of salience, the expected length increases to 4,637, a change of roughly 30%.¹⁵⁸

The substantive strength of *Case Complexity* is also strong. A case with an average level of complexity is predicted to have a length around 3,828 words. Increasing complexity by two standard deviations (a change of two units on the x-axis in Figure 9) results in the addition of 502 words to the opinion.¹⁵⁹

^{155.} As we note in the table, we also include individual dummy variables for each Justice using Justice Burger as the omitted category. Consistent with the descriptive results portrayed in Figure 5 and Figure 6, there are statistically significant differences in length across Justices. For example, every Justice on the Court except for Black and Douglas wrote longer opinions than Chief Justice Burger. To conserve space, we elect not to report them here. Interested readers can contact us to obtain the full table.

^{156.} The 95% confidence interval for this change is [7, 51].

^{157.} The 95% confidence interval for this change is [27, 200].

^{158.} The 95% confidence interval for each predicted value and the change is [3,301, 3,871] (5th percentile), [4,216, 5,058] (95th percentile), and [780, 1,300] (change between the two values).

^{159.} The 95% confidence interval for each predicted value and the change is [3,529, 4,127] (average), [3,948, 4,711] (plus two standard deviations), and [328, 676] (change between the two values).

HOUSTON LAW REVIEW

[45:3]



Figure 9: Line graphs of expected opinion length conditional on case salience (left panel) and case complexity (right panel). All other variables are held at their median values, supra note 205. The solid line represents the mean prediction, and the dotted lines are 95% confidence intervals.

We also find characteristics falling under the rubric of "legal context" matter. Opinions that overrule the Court's own precedent are roughly 28% longer than those that do not,¹⁶⁰ and opinions dealing with matters of constitutional interpretation as opposed to statutory interpretation are, all else equal, around 309 words shorter.¹⁶¹ We do not find, however, that civil liberties opinions are any longer than those not dealing with civil liberties issues. Finally, and consistent with our expectations, opinions with an appendix are significantly longer¹⁶² than those without one, and per curiam opinions are shorter¹⁶³ than opinions that are not per curiam.

^{160.} The mean difference between an overruling and nonoverruling opinion is 1,047 words with a 95% confidence interval of [468, 1,600].

^{161.} The 95% confidence interval for this difference is [140, 480].

^{162.} The average difference between an opinion with an appendix and one without is that the former is 2,274 words longer than the latter. The 95% confidence interval is [1,600, 3,000].

^{163.} Per curiam opinions are on average 3,082 words shorter than non-per curiam opinions. The 95% confidence interval for the difference is [2,800, 3,400].

D. Discussion

Our analysis represents the first effort to demonstrate systematically which factors influence the length of the Court's majority opinions. Taken together, they suggest an especially compelling story that the length is a function of both the collegial game the Justices play and case characteristics. To illustrate this interaction and how the variables discussed above can come together to influence length, consider three hypothetical case scenarios depicted in Figure 10.



Figure 10: Dot plot of expected opinion length for three hypothetical cases. Scenario 1 is a relatively mundane case that is neither salient nor complex with no bargaining and is assigned early in the term. Scenario 2 is the median case, where all variables are set at their median value. Scenario 3 is a salient and complex case with extensive bargaining that overturns the Court's precedent. All other variables are held at their median value, supra note 205. The solid line represents the mean prediction, and the dotted lines are 95% confidence intervals.

HOUSTON LAW REVIEW

[45:3]

First consider Scenario 1, which is depicted on the far left side of the plot. Such a case is neither salient nor complicated, the conference vote is unanimous, the opinion was assigned late in the Term, and there is no bargaining among the Justices. In other words, consider a relatively mundane case.¹⁶⁴ We predict the author writing for the majority in this case would produce an opinion with 2,948 words in length with a 95% confidence interval of [2.649, 3.246]. In the middle of the plot we show Scenario 2, which is a baseline where all variables are set at their median values. The opinion length averages 3,705 words, and the 95% confidence interval is [3,414, 3,996]. Contrast this average case and the mundane case with Scenario 3, which is a politically salient and legally complicated case in which the opinion author has a minimum winning conference coalition. encounters considerable bargaining from her colleagues, overrules precedent, and is assigned the case early in the Term.¹⁶⁵ We predict the majority opinion in such a case will contain 8.895 words with a 95% confidence interval of [7,463, 10,327].¹⁶⁶ This is over three times the length of the mundane case and perhaps the strongest evidence of the overall importance of the interplay among the variables in influencing opinion length.

V. THE EFFECT OF MAJORITY OPINION LENGTH

In the previous Part we maintained opinion length is neither some random quantity nor something completely determined by a limited set of factors such as author identity or the issue area of a case. Instead, it is a confluence of strategic and contextual factors that work together to shape dramatically the length of majority opinions. This finding is altogether new to the literature and, from our perspective, important. In this Part we seek to offer another contribution to the literature by providing systematic evidence of one way opinion length matters. To begin to assess the role of opinion length in this regard, we turn to an examination of the usage and treatment of Supreme Court precedent in lower federal court opinions.

^{164.} More specifically, we set *Case Salience* and *Case Complexity* at their 5th percentile values. We set days until end of Term at 26 and set all other variables to their median values, listed at *supra* note 150.

^{165.} We set *Case Salience* and *Case Complexity* at their 95th percentile values. We set the days until end of Term at 271, and we specified that there were four majority bargaining memos and three minority bargaining memos circulated. All other variables are set at their median values, listed at *supra* note 150.

^{166.} The difference between these values is statistically significant. The mean difference is 5,947 words with a 95% confidence interval of [4,500, 7,400].

A. Citation and Treatment of Supreme Court Precedent by Lower Federal Courts

In this Part, we endeavor to determine to what extent the length of a majority opinion influences the opinion's subsequent use in the lower federal courts. The citation of precedent is one way of capturing the degree to which a given opinion is influencing legal development in the lower courts. The more often a case is cited, the higher the likelihood it is exerting an effect on the decisions of lower court judges and contributing to the development of law. While a number of prior studies attempt to gauge the influence of the Supreme Court on lower courts, some of them even through an examination of citations to Supreme Court opinions, none of them address the role of opinion length.¹⁶⁷

Our argument is that longer opinions will result in greater lower court usage of an opinion because extra verbiage allows for a case to be seen as potentially relevant for a broader set of legal disputes. The use of precedent depends in part on the process of analogical reasoning, in which lower court judges refer to the Supreme Court precedent as the example and determine to what degree it fits the contours of the case being decided.¹⁶⁸ Supreme Court opinions with a larger number of words have the potential to be interpreted as applying to a larger set of factual circumstances, and thus longer opinions will more often be cited by lower courts than shorter opinions.

B. Data, Measures, and Methods

We use the same 2,274 signed or per curiam opinions released between the 1969 and 1985 Terms as in the previous Part's analyses. Using *Shepard's Citations*, we counted the

^{167.} See, e.g., HANSFORD & SPRIGGS, supra note 5, ch. 7 (analyzing the response of federal courts to Supreme Court decisions without considering length of opinions); DAVID E. KLEIN, MAKING LAW IN THE UNITED STATES COURTS OF APPEALS (2002); Sara C. Benesh & Malia Reddick, Overruled: An Event History Analysis of Lower Court Reaction to Supreme Court Alteration of Precedent, 64 J. POLITICS 534 (2002); Frank Cross, Appellate Court Adherence to Precedent, 2 J. EMPIRICAL LEGAL STUD. 369 (2005); Fowler et al., supra note 6; Charles A. Johnson, Law, Politics, and Judicial Decision Making: Lower Federal Court Uses of Supreme Court Decisions, 21 LAW & SOC'Y REV. 325 (1987); Donald R. Songer et al., The Hierarcy of Justice: Testing a Principal—Agent Model of Supreme Court—Circuit Court Interactions, 38 AM. J. POL. SCI. 673 (1994).

^{168.} See, e.g., Ruggero J. Aldisert, Precedent: What It Is and What It Isn't; When Do We Kiss It and When Do We Kill It?, 17 PEPP. L. REV. 605, 615, 620 (1990) (commenting on the use of analogy in legal reasoning); see also BENJAMIN N. CARDOZO, THE NATURE OF THE JUDICIAL PROCESS 19–21 (1921) (detailing the methodology of matching a case to a precedent); EDWARD H. LEVI, AN INTRODUCTION TO LEGAL REASONING 1–2 (1948) (illustrating the basic steps of legal reasoning).

HOUSTON LAW REVIEW

[45:3]

number of times each opinion was cited by a U.S. court of appeals or a federal district court¹⁶⁹ for each year beginning in the year the opinion was released and ending in 2005.¹⁷⁰ That is, our data set contains an observation for each of these 2,274 opinions for each year of its "life," starting the year the Court decided the case and ending in 2005. For instance, a case decided in 1972 will have an observation in our data set for 1972 and every year thereafter through 2005, for a total of thirty-three observations. An opinion decided in 2000, by contrast, will have only six observations. Our objective is to explain the number of citations to each opinion in each year of its existence as a function of the length of the majority opinion, where we measure majority opinion length as the total number of words in an opinion, including footnotes, as described above.¹⁷¹

1. Dependent Variables. We examine three dependent variables relating to lower federal courts' usage of Supreme Court precedent. For each of them, we use Shepard's Citations to collect data on the number of times the U.S. courts of appeals and federal district courts cite each majority opinion in a given year. As discussed below, "Shepard's Citations is a legal citation service that, among other things, provides a list of all U.S. court opinions that refer to any U.S. state or federal court case decided since the beginning of the U.S. legal system."¹⁷² We can thus get a clean measure of the degree to which lower courts are citing Supreme Court precedent. Importantly, research by Hansford and Spriggs shows that Shepard's Citations reliably lists citations to Supreme Court opinions and generally provides the complete list of cases citing a given majority opinion.¹⁷³

Our first dependent variable examines the number of times lower federal courts cite a majority opinion without subjecting that precedent to any substantive legal interpretation. That is, in such an instance the lower court reference to the case does not explicitly contain language that potentially affects the legal

^{169.} We included cases decided by every Federal District Court, each of the eleven numbered Courts of Appeals, and the Court of Appeals for the District of Columbia.

^{170.} We obtained these data from Fowler et al., supra note 6, at 327–28 (elaborating upon their research methods).

^{171.} See supra Part III.A.

^{172.} James F. Spriggs, II & Thomas G. Hansford, *Measuring Legal Change: The Reliability and Validity of* Shepard's Citations, 53 POL. RES. Q. 327, 328–29 (2000).

^{173.} See HANSFORD & SPRIGGS, supra note 5, at 46–49 (mimicking the methods used by Shepard's Citations and reaching the same result nearly every time); Spriggs & Hansford, supra note 172, at 329 (empirically testing the reliability of Shepard's Citations).

status of the precedent. Most of these citations are commonly referred to as "string citations," in which the citing case does little more than refer to the cited case and offers little in the way of meaningful discussion of it. We use the *Shepard's Citations* categories of "Cited by,"¹⁷⁴ "Explained by,"¹⁷⁵ and "Harmonized by"¹⁷⁶ for this dependent variable, which we refer to as *Nontreating Citations*. We specifically measure it as the total number of times, for each Supreme Court opinion in each year of its "life," *Shepard's Citations* codes U.S. court of appeals and federal district court opinions as citing, explaining, or harmonizing the Supreme Court opinion.

While an examination of the presence of a citation to a case is interesting and important, it is also necessary to go beyond that evidence and probe the manner, if any, in which the citing case legally interprets the cited case. The legal interpretation of precedent, as Hansford and Spriggs argue,¹⁷⁷ begins to get at the notion of legal change. When a court interprets a precedent, it can shape it by restricting or broadening its applicability, and thus potentially influencing the shape of law regarding it.

Broadly speaking, the interpretation of precedent falls into two categories—positive and negative treatment.¹⁷⁸ Positive

^{174.} Shepard's labels a case as "cited by" if there is no language in the decision that would allow them to assign one of the substantive treatment categories, such as "followed" or "distinguished." In other words, the citation is basically a string citation. See HANSFORD & SPRIGGS, *supra* note 5, at 44–46 (chronicling the methods used by Shepard's Citations to categorize the treatment of precedent).

^{175.} Shepard's defines "explained" as: "Statement of import of decision in cited case. Not merely a restatement of facts." Shepard's Citations Training Manual 13 (July 1993) (unpublished training manual, on file with the Houston Law Review) [hereinafter Shepard's Training Manual]. While there is discussion of a case, it does not amount to a substantive legal interpretation of the cited case. See HANSFORD & SPRIGGS, supra note 5, at 44 n.4 (noting "explained" does not connote a positive or a negative interpretation).

^{176.} *Shepard's* defines "harmonized" as: "Apparent inconsistency explained and shown not to exist." Shepard's Training Manual, *supra* note 175, at 13. While there is discussion of a case, it does not amount to a substantive legal interpretation of the cited case. *See* HANSFORD & SPRIGGS, *supra* note 5, at 44 n.4 (citing to *Shepard's*).

^{177.} See HANSFORD & SPRIGGS, supra note 5, at 8 (evidencing the effect of legal interpretation on governmental and nongovernmental matters).

^{178.} Shepard's has developed a set of coding protocols to make this determination. One can find a description of these protocols online. See Shepard's Product Guide, supra note 131. The rules for making the subjective determination of the type of treatment a citing case delivers to cited cases is discussed much more extensively in an unpublished training manual. See Shepard's Training Manual, supra note 175, at 3. Importantly, Hansford and Spriggs show Shepard's coding protocols are both valid (Shepard's assignment of treatment designations actually captures the difference in positive and negative interpretation) and reliable (Shepard's coding of decisions can be reproduced by other individuals), and thus they meet the exacting standards of social science. See HANSFORD & SPRIGGS, supra note 5, at 46–50 (detailing the methods used to determine

HOUSTON LAW REVIEW

[45:3]

interpretation occurs when a citing case relies on a precedent when resolving a dispute and in so doing reiterates its authoritativeness and possibly expands its scope.¹⁷⁹ The citing case thus follows the cited case and indicates it was "controlling authority."¹⁸⁰ By contrast, negative interpretation takes place when a citing case expresses some level of disagreement with a previous decision.¹⁸¹ Negative interpretation of a precedent may restrict the reach of a precedent or call into question its legal standing. A court, for example, can distinguish a precedent by finding it inapplicable to a new factual situation, limit a case by restating the legal rule in a more limited way, or (if it has the authority to do so) even overrule a case and declare it is no longer binding.

To measure positive and negative interpretation, we again rely on Shepard's Citations, which provides an editorial analysis capturing the potential legal effect of each citing case on the cited case. For each citing case-cited case pairing, Shepard's Citations determines, as stated in its unpublished training manual, "What effect, if any, does the citing case have on the cited case?"¹⁸² That is, Shepard's Citations characterizes the substantive nature of the legal interpretation the citing case accords the cited case. For Shepard's to indicate that a citing case legally treated a cited case, it must do more than simply cite it. The citing case must provide specific language that has a potential effect on the legal authority or meaning of the precedent.¹⁸³ Hansford and Spriggs provide a detailed discussion of the type of language an opinion must use in order for Shepard's to assign one of these treatment categories, concluding Shepard's coding protocols lead to valid and reliable data.¹⁸⁴

Shepard's categorization of the treatment of an opinion can be either positive or negative. Shepard's considers a citing case to positively interpret a precedent if it "Follows" the cited case. We therefore code a citing case as being positively

the integrity of *Shepard's* coding protocols). For a discussion of validity and reliability in the social sciences, see generally EDWARD G. CARMINES & RICHARD A. ZELLER, RELIABILITY AND VALIDITY ASSESSMENT (1979).

^{179.} HANSFORD & SPRIGGS, *supra* note 5, at 6.

^{180.} Shepard's Training Manual, *supra* note 175, at 17.

^{181.} HANSFORD & SPRIGGS, supra note 5, at 6.

^{182.} Shepard's Training Manual, supra note 175, at 5.

^{183.} *Shepard's* unpublished training manual states, for example, "Merely citing or quoting, with nothing more, is not a sufficient expression of reliance to permit an 'f' (Or any letter, for that matter)." *Id.* at 17.

^{184.} HANFORD & SPRIGGS, supra note 5, at 44–46 (describing the language necessary for Shepard's to assign a treatment category).

interpreted by the lower courts if it was "Followed" by¹⁸⁵ or "Paralleled" by¹⁸⁶ a lower court decision. We call this category *Positive Treatment*. These are the treatment categories that *Shepard's* labels with a "green signal," meaning that there was "positive treatment indicated" in the language of the citing case.¹⁸⁷

Shepard's codes a citing case as negatively treating a cited case if it potentially exerts a negative effect on the legal status of the precedent.¹⁸⁸ We collapse four of Shepard's treatment categories into what we label Negative Treatment—"Questioned by,"¹⁸⁹ "Limited by,"¹⁹⁰ "Criticized by,"¹⁹¹ and "Distinguished by."¹⁹² These categories are the ones in which Shepard's assigns an "orange" or "yellow" signal, meaning the "validity" of the cited case has been "questioned" or it has received "possible negative treatment."¹⁹³

2. Control Variables. To ensure that our estimation of the effect of majority opinion length on subsequent lower court citations is not capturing the influence of other factors that may be correlated with opinion length, we include a series of control variables in our analysis. These variables capture case-specific effects that do not vary over time, such as the salience of a case when it was decided, the legal basis of the opinion, and whether the opinion overrules precedent. They also capture variables that are dynamic in nature and vary over time for each case, such as the age of a majority opinion and the degree to which the opinion

^{185.} *Shepard's* defines "Followed" as: "The citing opinion relies on the cited case as controlling or persuasive authority." Shepard's Product Guide, *supra* note 131.

^{186. &}quot;Paralleled" means: "The citing case relies on the cited case by describing it as 'on all fours' or parallel to the citing case." Shepard's Product Guide, *supra* note 131.

^{187.} See Shepard's Product Guide, List of Analysis Definitions Grouped by Green Signal, http://www.lexis.com (last visited Sept. 5, 2008) (sign into LexisNexis; follow "Research" hyperlink; then follow "LexisNexis® Information & Training" hyperlink; then follow "Product Guide—SHEPARD'S Citations" hyperlink; then follow "View a List of Analysis Definitions Grouped by SHEPARD'S Signals" hyperlink; then follow "View a List of Analysis Definitions Grouped by Green Signal" hyperlink).

^{188.} Shepard's Training Manual, *supra* note 175, at 14, 24.

^{189.} *Shepard's* defines "Questioned by" as: "The citing opinion questions the continuing validity or precedential value of the [cited] case." *See* Shepard's Product Guide, *supra* note 131.

^{190.} *Shepard's* defines "Limited by" as: "[T]he citing opinion restricts the application of the cited case, finding its reasoning applies only in specific, limited circumstances." *See* Shepard's Product Guide, *supra* note 131.

^{191.} *Shepard's* defines "Criticized by" as: "Soundness of decision or reasoning in cited case criticized for reasons given." Shepard's Training Manual, *supra* note 175, at 12.

^{192.} *Shepard's* defines "Distinguished" as: "The citing case differs from [the cited cases] either involving dissimilar factors or requiring a different application of the law." Shepard's Product Guide, *supra* note 131.

^{193.} See Shepard's Product Guide, supra note 187.

HOUSTON LAW REVIEW

[45:3]

remains relevant for Supreme Court policymaking (as determined by the extent to which a given opinion remains embedded in the network of citations among all U.S. Supreme Court opinions).¹⁹⁴ To be clear, all of these variables measure attributes of the Supreme Court's majority opinions, not attributes of the lower court decisions that cite the Court's opinions.

We first describe the independent variables used in our previous analysis that are relevant for understanding lower court citations. Their detailed descriptions can be found above.¹⁹⁵ These variables include the following: Case Salience (a z-score for the level of amicus participation in the case), *Case Complexity* (a factor score of the number of issues and legal provisions in the precedent), Per Curiam Opinion (equals 1 if the precedent-setting opinion was designated as per curiam), Constitutional Interpretation (equals 1 if the Court used the Constitution as the basis for the opinion), Civil Liberties Issue (equals 1 if the opinion dealt with civil liberties), Freshman Opinion Author (equals 1 if it was one of the first two Terms the majority opinion author was on the Court), Opinion Overrules Precedent (equals 1 if Shepard's Citations indicates the opinion overruled a prior decision of the Court), Opinion Strikes Law as Unconstitutional (equals 1 if Spaeth determined the opinion struck down a state or federal law as unconstitutional).

We also include several independent variables not applicable to the analysis in the previous Part but necessary for understanding how often an opinion is subsequently cited in lower courts. First, we include a measure of the political salience of the case at the time it was decided, coded as 1 if the case was discussed on the front page of the *New York Times* the day after the Court decided it (*New York Times*).¹⁹⁶ We also control for the age of a case, given the now wellestablished empirical regularity of older cases being cited less often than younger cases, and this effect either switching directions or becoming smaller for exceedingly old cases.¹⁹⁷ We measure this nonlinear effect of age with two variables: *Age*, which is the number of years since the Court decided an opinion, and the square of this

^{194.} *See generally* Fowler et al., *supra* note 6 (decoding the network of citations from one case to another).

^{195.} See supra Part IV.A.2.

^{196.} Epstein & Segal, supra note 104, at 72–73 (illustrating the New York Times variable).

^{197.} See William M. Landes & Richard A. Posner, Legal Precedent: A Theoretical and Empirical Analysis, 19 J.L. & ECON. 249, 275 (1976) (describing the depreciation rate of citation age); see also HANSFORD & SPRIGGS, supra note 5, at 53 (identifying the decline in citations to precedent over time); Benesh & Reddick, supra note 167, at 537 (rationalizing the decline in citations to precedent over time); Fowler et al., supra note 6, at 335 (illustrating the decrease in relevance of a precedent over time).

number, Age-Squared. This quadratic formulation allows for age to have a nonlinear effect; specifically, it allows for the effect of age to switch directions at one point across the values of Age.¹⁹⁸ We also control for two features in the opinion—the nature of the voting and opinion coalitions-that scholars and judges often suggest is associated with how lower courts use Supreme Court precedent. We measure Number of Special Concurrences as the number of "specially" concurring opinions in a case, as determined by Spaeth.¹⁹⁹ We capture the size of the final majority coalition in the precedent with two dummy variables: Final Vote Was Minimum Winning equaling 1 if the final vote was 5-4 (in a nine- or eightmember Court), and Final Vote Was Unanimous equaling 1 if there were no dissenting Justices. Non-minimum winning and nonunanimous final votes serve as the baseline comparison for these two variables.²⁰⁰ To control for the possibility of changes in the way cases are cited over time, we include a variable, Citing Year, which takes on the value of the year being examined in a given observation of the data. That is, if the data point in question concerns the year 1975, this variable would take on the value of 1975. Finally, we control for an important characteristic of a case that varies both across cases and over time-its continuing relevance for law at the U.S. Supreme Court. To measure this concept, we use a variable created by Fowler et al.,²⁰¹ who used a quantitative technique in social network analysis that examined patterns of citations within and across U.S. Supreme Court opinions to develop a measure of how central each opinion was in the entire network of Supreme Court law in each year of a case's "life."202

^{198.} See AGRESTI & FINLAY, *supra* note 44, at 358–64, for a discussion of how one models a nonlinear relationship.

^{199.} SPAETH, supra note 106, at 83–84 (detailing the Special Concurrence variable).

^{200.} This is not to be confused with the vote variables used for our earlier determinants analysis, *supra* Part IV.A.1, which captured the outcome of the conference vote and not the final merits vote. The conference vote is the initial vote that takes place after oral arguments. Which Justice gets to assign the majority opinion is based on the conference vote. *See* REHNQUIST, *supra* note 74, at 296. This vote is initial in that the Justices can and do switch their vote as the opinion is drafted and bargaining takes place. *See* Maltzman & Wahlbeck, *Strategic Policy Considerations, supra* note 32, at 581.

^{201.} See Fowler et al., *supra* note 6, at 328–31 (using a node-link framework to illustrate the relevance of a case through its pattern of outward and inward citations).

^{202.} This measure uses both inward citations (citations to a given Supreme Court precedent from other Supreme Court opinions) and outward citations (citations within a given Supreme Court opinion to other Supreme Court cases) to measure how central each opinion was in the network of all opinions of the Court from 1790 to 2005. Fowler et al. label the measure we use here as *Inward Relevance*, and a more inwardly relevant case "is one that is widely cited by other prestigious decisions, meaning that judges see it as an integral part of the law." *Id.* at 330. They further label inwardly relevant cases as those that are most "influential" in the network of law at the Supreme Court. *Id.* at 331. Their measure is based exclusively on citations within Supreme Court opinions and thus

HOUSTON LAW REVIEW

[45:3]

Larger values indicate a case is more relevant in the network of law at the Court.

It bears emphasizing that our analysis controls for a large number of factors that are likely to capture a significant amount of variation in the citation practices of lower courts. Consider, for example, that we include variables for the degree to which the case remains legally relevant at the Supreme Court and the age of the case, both of which are likely to be strongly correlated with the length of a majority opinion and subsequent lower court citations to it. Because these correlations are high, there is likely to be less variation remaining for our *Total Majority Opinion Length* variable to pick up. In other words, by including a large range of control variables we are, in effect, stacking the deck *against* finding that opinion length systematically matters.

Because our dependent variable, the number of citations to a case in a given year, is a count variable, we estimate a negative binomial regression $model^{203}$ with robust standard errors clustered on each opinion.²⁰⁴

C. Results

We report the results of our analysis in Table 2. The positive coefficient for *Total Majority Opinion Length* indicates that, even after controlling for a wide variety of reasons lower courts may cite a Supreme Court precedent, longer opinions are more likely to be cited. We depict the substantive effect of opinion length in Figure 11 and Figure 12. Figure 11 portrays the relationship between length and lower court string citations of Supreme Court majority opinions. When the length of a majority opinion is at the 25th percentile (3,018 words) our model predicts it will receive 6.4 nontreatment citations in the lower federal courts in a year [5.6, 7.2] (95% confidence interval).²⁰⁵ This number of annual

captures legal relevance of a case for the network of cases at the Court.

^{203.} See LONG, supra note 146, at 230–38 (addressing negative binomial regression models).

^{204.} The clustering of standard errors is appropriate when the researcher believes a particular grouping variable is the one across which observations are not statistically independent. Here, we relax the assumption of independence for observations coming from the same Supreme Court opinion, which are likely to be related. *See* White, *supra* note 147, at 818, 822.

^{205.} We hold the control variables at the following values, which are either means or medians: Lagged Citations = 6 (for nontreating model) or 0 (for both positive and negative treatment models); Case Salience = 1.56; Case Complexity = 0.005; New York Times Salience = 0; Age = 14; Age-Squared = 196; Per Curiam = 0; Number of Special Concurrences = 0; Final Vote = Non-Minimum Winning and Non-Unanimous; Constitutional Issue = 0; Civil Liberties value = 1; Freshman Author = 0; Overrule Precedent = 0; Strike Unconstitutional = 0; Authority = 0.71; and Citing Year = 1992.

nontreatment citations increases to 7.3 when majority opinion length is at 6,166 words, its 75th percentile value [6.3, 8.4] (95%) confidence interval). This change in citation rate,²⁰⁶ while seemingly low in absolute terms, represents approximately a 14% increase in the annual rate of nontreatment citations. Of course, changing the counterfactual to more extreme values alters the frequency of citation accordingly. The longest majority opinion in our data, recall, is over 30,000 words in length, while the shortest is a mere 10 words in length.²⁰⁷ The shortest opinion is cited approximately 5.6 times per year (with a 95% confidence interval of [4.9, 6.3]) while the longest is cited 21 times per year (with a 95% confidence interval of [12, 30]). This increase in the citation rate represents a 275% change in the number of citations a majority opinion receives in a year.



Figure 11: Line graph of expected number of nontreating citations to a Supreme Court opinion by the lower federal courts in a given year, conditional on the Supreme Court opinion's length (x-axis). We set control variables at their median or mean values, supra note 205. The dotted line represents the 95% confidence interval.

^{206.} The change is 0.9 citations more between the 25th and 75th percentiles. The 95% confidence interval around that change is [0.6, 1.3].

^{207.} See supra Part IV.B.

HOUSTON LAW REVIEW

Table 2: Negative Binomial Regression of the Number ofCitations and Treatments of Majority Opinions of the U.S.Supreme Court (1969–2005 Terms)

Coefficient (Robust Standard Error)

Variable	Nontreating Citation	Positive Treatment	Negative Treatment
Total Majority Opinion Length	0.00004* (0.000007)	0.00006* (0.000009)	0.00005* (0.000007)
Lagged Dependent Variable	0.028* (0.004)	0.178* (0.023)	0.388* (0.017)
Case Salience	-0.003 (0.004)	0.004(0.005)	$0.011^{*}(0.004)$
Case Complexity	0.020(0.013)	0.006(0.017)	0.019 (0.016)
New York Times	0.021(0.040)	0.006(0.053)	-0.021 (0.044)
Age	-0.086* (0.006)	$-0.134^{*}(0.009)$	-0.111* (0.006)
Age-Squared	$0.001^{st} (0.0001)$	$0.002^{st} \left(0.0002 ight)$	0.002* (0.0001)
Per Curiam Opinion	-1.009* (0.203)	$-1.166^{*} (0.291)$	-1.111* (0.229)
Number of Special Concurrences	0.011 (0.021)	0.0002 (0.028)	-0.002 (0.026)
Final Vote was Minimum Winning	-0.002 (0.035)	0.017 (0.048)	0.025 (0.043)
Final Vote was Unanimous	0.019 (0.034)	0.024 (0.045)	-0.046 (0.041)
Constitutional Interpretation	-0.118* (0.040)	-0.086 (0.046)	-0.033 (0.042)
Civil Liberties Issue	$0.183^{st} \left(0.038 ight)$	$0.165^{st} (0.049)$	$0.175^{*}\left(0.044 ight)$
Freshman Opinion Author	-0.012 (0.054)	0.014 (0.071)	0.053(0.064)
Opinion Overrules Precedent	0.207 (0.161)	0.250 (0.143)	0.149 (0.096)
Opinion Strikes Law as Unconstitutional	-0.174* (0.056)	-0.230* (0.076)	0.029(0.051)
Lagged Value of Opinion Relevance	$1.202^{*}\left(0.125 ight)$	$1.094^{*}\left(0.111 ight)$	0.895* (0.076)
Citing Year	$0.018^{st} (0.003)$	$0.034^{st}(0.005)$	$0.012^{*}(0.004)$
Constant	-34.428* (6.506)	-68.231* (8.928)	-25.150* (7.226)
Alpha	0.832(0.082)	0.416(0.103)	0.963(0.038)
Number of Observations	60,780	60,780	60,780

Note: * denotes p < 0.05 (two-tailed test)

[45:3]

Negative citations occur even less frequently, but the relative effect across opinion length is still approximately the same. At the 25th percentile of opinion length (again with all variables at mean or median values²⁰⁸), an opinion gets negatively treated 0.27 [0.25, 0.30] times per year. At the 75th percentile of length, the same opinion is treated negatively 0.32 [0.29, 0.34] times per year. This is a 19% increase²⁰⁹ across these two values and, given the relative rarity of both positive and negative interpretation, represents what we would deem a substantively meaningful increase.



Figure 12: Line graph of expected number of positive (top panel) and negative (bottom panel) citations to a

^{208.} For variable values, see *supra* note 205.

^{209.} The average difference between the 25th and 75th percentiles is 0.04 with a 95% confidence interval of [0.03, 0.06].

HOUSTON LAW REVIEW

Supreme Court opinion by the lower federal courts in a given year, conditional on the Supreme Court opinion's length (x-axis). We set control variables at their median or mean values, supra note 205. The dotted line represents the 95% confidence interval.

D. Discussion

We started this Part having achieved a large degree of success at explaining why some majority opinions were longer than others—in other words, at identifying the determinants of opinion length. As students of the Supreme Court and law more generally, we believe it is important to understand how certain factors collude to influence opinion length. If the literature discussed earlier is any indication,²¹⁰ a large group of others will share this interest for a variety of reasons. What we have achieved in this Part is to provide additional and novel empirical support as to why variation in opinion length does, in fact. matter. To summarize, we have shown that opinion length is an important factor that influences the frequency with which the lower federal courts cite and interpret Supreme Court precedents. In particular, we conclude the longer the opinion, all else equal, the more often the lower courts will reference that opinion both in the form of string citations as well as positive and negative treatments. This important finding is new to the literature and provides additional insight into what factors shape the development of law.

VI. CONCLUSION

The length of majority opinions of the U.S. Supreme Court is often discussed but has yet to receive the same careful empirical scrutiny that so many other aspects of the Court's business have received.²¹¹ Given the contentious normative debate over opinion length, this oversight is especially surprising. In this Article we sought to provide an empirically informed account of various aspects of this debate. In so doing we also provided insights into the overall trends, determinants, and effects of opinion length that are novel to the literature and our understanding of Supreme Court decisionmaking. At the aggregate level, for

[45:3]

^{210.} See supra Part II and notes therein (examining opinion length as it relates to issues such as language, style, complexity, clarity, workload, and efficiency).

^{211.} See sources cited supra note 32.

example, we show that while opinion length has increased since the early days of the Court's existence, the trend has not been a simple linear increase that many would suspect existed. Rather, the story is a more complicated one where periods of sustained growth have given way to multiple years where length declines.

More generally, our study underscores the value of conducting empirical legal scholarship if for no other reason than its ability to provide evidence to support or refute the "conventional wisdom" surrounding various phenomena. In assessing the systematic components of this overall growth, for example, we have provided empirical evidence that law clerks, the most commonly cited cause of opinion length, are not among the largest culprits for the increase in length—both in the aggregate from 1790 through 2005 as well as in the modern era from 1953 through 2005. In explaining the overall trend in opinion length, we suggest it is most likely a function of the Court's institutional development across time, and while the usage of law clerks is a part of that development, it is not the underlying cause.

Moving to the determinants and effects, we note that while an opinion's length is ultimately just a simple number, this simplicity conceals a very rich and complicated story about how that number was created and why an opinion's length is an important quantity long after the opinion has been written. That is, an opinion's overall length is shaped by a confluence of casespecific and collegial factors, such as the level of bargaining among Justices on the Court. Moreover, an opinion's length is one of several variables that influence the extent to which that opinion will subsequently be analyzed and cited by the lower federal courts.

For all the questions this study provides empirical answers to, there are many more that remain to be answered. The interaction among the Justices is one of the key factors that influence an opinion's length. Here, however, we have focused on just one Chief Justice's tenure—that of Warren Burger—to examine collegial interaction. We imagine styles of leadership and the overall climate of collegiality vary across different Chief Justices, and this variation likely has important consequences for the length of the Court's majority opinions. The recent unveiling of the papers of Justice Harry A. Blackmun²¹² will provide

^{212.} The papers of Justice Harry A. Blackmun, located in the Manuscript Reading Room in the Library of Congress in Washington, D.C., were made available to researchers on March 4, 2004 and have already been utilized by journalists and scholars alike to answer a variety of questions. Indeed, a search for "Blackmun papers" in the LexisNexis

HOUSTON LAW REVIEW

[45:3]

scholars with the opportunity to see how the leadership of Chief Justice William Rehnquist altered interaction among the Justices for a sizeable portion of his tenure as Chief Justice.²¹³

Beyond examining other periods of time, an equally appealing extension of this research would be to investigate trends in opinion length on the lower federal courts. For example, previous legal scholarship suggests judges on the U.S. courts of appeals might utilize opinion publication status as a way to insulate themselves from en banc and Supreme Court review.²¹⁴ By extension, judges might plausibly write shorter opinions to signal a case's overall unimportance to both their circuit peers and the reviewing eyes of Justices on the Court. In this regard, opinion length could be both a dependent variable (under what conditions judges write shorter opinions) and an independent variable (does opinion length systematically influence the probability of en banc or Supreme Court review?) in empirical analyses.

We could list a host of other examples, but the point we ultimately wish to suggest is that given the list of results presented above, these are not just questions that scholars *could* pursue but are important questions that they *should* pursue. Notwithstanding a lack of scholarly treatment, opinion length, as a topic of intrinsic value or as a surrogate for other theoretical concepts of interest, is something that deserves rigorous empirical scrutiny.

[&]quot;U.S. Law Reviews and Journals, Combined" database reveals 101 hits (search conducted on Aug. 19, 2008), with many more surely in the research pipeline.

^{213.} Justice Blackmun served through the end of the October 1993 Term, which provides eight full Terms of data about the Rehnquist Court for scholars to analyze. WARD & WEIDEN, *supra* note 49, at 59.

^{214.} See, e.g., David S. Law, Strategic Judicial Lawmaking: Ideology, Publication, and Asylum Law in the Ninth Circuit, 73 U. CIN. L. REV. 817, 820 (2005) (inferring the ideological motivations behind unpublished decisions). For a general discussion of the determinants of en banc review and the Court's monitoring of these decisions, see Tracey E. George & Michael E. Solimine, Supreme Court Monitoring of the United States Courts of Appeals En Banc, 9 SUP. CT. ECON. REV. 171 (2001) (considering the interaction between the discretionary jurisdiction of the Supreme Court and the en banc process); Tracey E. George, The Dynamics and Determinants of the Decision to Grant En Banc Review, 74 WASH. L. REV. 213 (1999).