

The United States Supreme Court and Lower Court Compliance

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Abstract. How can courts achieve higher compliance from lower courts? I identify and examine 2,771 lower court treatments of a random sample of 110 Supreme Court cases, and find that lower courts are more likely to positively treat and less likely to negatively treat Supreme Court majority opinions that more thoroughly discuss cited legal authorities. These findings suggest that Supreme Court justices, when crafting opinions, have the ability to influence the degree of compliance by lower courts by dedicating more attention to discussing precedents cited in the majority opinions.

How can courts achieve higher compliance from lower courts? Previous research shows that courts can encourage compliance from lower courts when they speak with a unified voice in the form of a unanimous opinion¹ or when they write opinions that are more readable², or contain a higher degree of certain language.³ Additionally, empirical work shows that the strength of the Supreme Court precedent enhances lower court compliance, with lower federal courts more likely to comply with Supreme Court precedents that have greater vitality.⁴

Stare decisis requires lower courts to follow the legal rule and support the outcome established by a higher court, irrespective of the lower court's policy preferences. Yet, several studies show that lower courts' treatment of Supreme Court precedent is far from perfect, with lower courts citing

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1. Sarah C. Benesh and Malia Reddick, "Overruled: An Event History Analysis of Lower Court Reaction to Supreme Court Alteration of Precedent," *Journal of Politics* 64, no. 2 (2002), <https://doi.org/10.1111/1468-2508.00138>.

2. Ryan C. Black, Ryan J. Owens, Justin Wedeking, and Patrick C. Wohlfarth, *U.S. Supreme Court and Their Audiences* (Cambridge University Press, 2016).

3. Pamela C. Corley and Justin Wedeking, "The (Dis)Advantage of Certainty: The Importance of Certainty in Language," *Law & Society Review* 48, no. 1 (2014), <https://doi.org/10.1111/lasr.12058>.

4. See Black et al., *U.S. Supreme Court and Their Audiences*; Chad Westerland, Jeffrey A. Segal, Lee Epstein, Charles M. Cameron, and Scott Comparato, "Strategic Defiance and Compliance in the U.S. Courts of Appeals," *American Journal of Political Science* 54, no. 4 (2010), <https://doi.org/10.1111/j.1540-5907.2010.00465.x>. Vitality refers to the Supreme Court interpreting its own precedent positively more often than negatively.

some precedents positively while citing others negatively.⁵ This suggests there may be something different across opinions that enhances or mitigates the response.

Judges primarily communicate with their audiences—the parties to the case, other judges, the media, Congress, the president—using written language, which means the receiver of the communicated message must interpret the language before responding to it. Thus, the sender of the message has an opportunity to enhance the favorability of the response, and, consequently, enhance compliance. When the Supreme Court hands down a majority opinion, it “not only decides the case but explains why it does so, in ways that are meant to be both predictive and binding on other cases.”⁶ I propose that lower courts are more likely to comply with majority opinions that incorporate a more extensive discussion of precedents cited. Specifically, I examine U.S. Supreme Court opinions, analyzing how lower courts respond to Supreme Court decisions based on the variation in how strongly embedded the Supreme Court majority opinion is in precedent.

Strong, persuasive opinions can enhance the extent to which opinions are implemented by lower courts because “[w]riting opinions is a lot like writing briefs. Both are, at bottom, efforts to persuade. Lawyers want to satisfy clients and win cases. Judges want to persuade lawyers, litigants, and the community at large that the decision they have made . . . is the absolutely correct one.”⁷ And the persuasive power of courts is integral for judicial effectiveness because it is the only leverage courts have.⁸ Given that courts must rely on other actors to implement their decisions, possessing neither the power of the purse nor the sword,⁹ courts instead must rely on their persuasive power, which encourages implementation of their decisions and subsequently increases their ability to impact legal policy. Thus, what makes for a persuasive opinion? My central argument posits that a persuasive opinion contains a more extensive discussion of cited legal authorities.

5. See Charles A. Johnson, “Lower Court Reactions to Supreme Court Decisions: A Quantitative Examination,” *American Journal of Political Science* 23, no. 4 (1979), <https://doi.org/10.2307/2110807>; Thomas G. Hansford and James F. Spriggs II, *The Politics of Precedent on the U.S. Supreme Court* (Princeton University Press, 2006).

6. James Boyd White, “What’s an Opinion for?” *The University of Chicago Law Review* 62, no. 4 (1995): 1368, <https://www.jstor.org/stable/i272216>.

7. Michael J. Higdon, “Something Judicious This Way Comes . . . The Use of Foreshadowing as a Persuasive Device in Judicial Narrative,” *University of Richmond Law Review* 44, no. 4: 1242 (2010), HeinOnline.

8. See Vanessa A. Baird and Debra Javeline, “The Persuasive Power of Russian Courts,” *Political Research Quarterly* 60, no. 3, <https://doi.org/10.1177/1065912907305755>.

9. *The Federalist Papers*, ed. Clinton Rossiter (Mentor, 1999).

EXTENSIVE DISCUSSION OF CITED PRECEDENT

Citation of precedent is an important part of legal writing. Authority from precedent, or *stare decisis*, is the foundation of the American legal system. Courts rely on previous decisions on similar questions, or precedent, for guidance in deciding cases. Although there is debate on the effect of prior decisions on Supreme Court justices,¹⁰ it is expected that Supreme Court decisions will cite precedent. In fact, although Supreme Court justices rely on other legal resources, “*stare decisis* predominates.”¹¹ Specifically, precedents operate by laying down the rules that subsequent courts apply to the case before them. The reasoning for the result is arguably the most important part of a legal opinion, and the “norm” is that legal reasoning contains precedent. Reasons must be given if the opinion is going to be useful to lawyers and judges. “[O]pinions setting precedent will be scoured, today and tomorrow, by countless lawyers and judges duty bound to determine the rights and obligations of parties in dispute.”¹² And in writing an opinion, choices must be made not only which sources to use but how to use those sources.¹³ A judicial opinion “connects the case with earlier cases”¹⁴ Arguably, majority opinions that are well grounded in precedent are more legally strong opinions.

Previous research has found that Supreme Court opinions that cite more important precedents (measured by the opinion centrality score) have a lower probability of being overruled by the Supreme Court in the future¹⁵ and a higher probability of being cited and followed by lower federal circuit courts.¹⁶ Additionally, Supreme Court majority opinions are more likely to cite the accompanying dissent as the number of Supreme Court precedents cited by that dissent increases.¹⁷ However, even if an opinion is filled with citations to Supreme Court precedent, and important precedent, there is variation in how in depth the opinion discusses those precedents. A majority opinion may only contain a brief reference to a cited case in a

10. Hansford and Spriggs, *The Politics of Precedent on the U.S. Supreme Court*; Harold J. Spaeth and Jeffrey A. Segal, *Majority Rule or Minority Will: Adherence to Precedent on the U.S. Supreme Court* (Cambridge University Press, 1999); Saul Brenner and Harold J. Spaeth, *Stare Decisis: The Alteration of Precedent on the Supreme Court, 1946-1992* (Cambridge University Press, 1995).

11. Lee Epstein and Jack Knight, *The Choices Justices Make* (CQ Press, 1998), 172.

12. Richard B. Cappalli, “Improving Appellate Opinions,” *Judicature* 83, no. 6: 286 (2000), HeinOnline.

13. Michael J. Gerhardt, *The Power of Precedent* (Oxford University Press, 2008), 59.

14. White, “What’s an Opinion for?” 1367.

15. James H. Fowler and Sangick Jeon, “The authority of Supreme Court precedent,” *Social Networks* 30, no. 1 (2008), <https://doi.org/10.1016/j.socnet.2007.05.001>.

16. Ali S. Masood and Benjamin J. Kassow, “What’s in a Name: How US Supreme Court Justices Shape Law and Policy in the Lower Courts,” *Law & Social Inquiry* 48, no. 2 (2023), <https://doi.org/10.1017/lsi.2022.33>.

17. Pamela C. Corley and Artemus Ward, “Intra-Court Dialogue: The Impact of U.S. Supreme Court Dissents,” *Journal of Law and Courts* 8, no. 1 (2020), <https://doi.org/10.1086/704739>.

string citation or the majority opinion may contain an extended discussion of a cited case. Although previous research has not focused on the relationship between the depth of discussion on cited legal authorities and compliance, one recent study argued that women and minority judges feel pressure to work harder than their white male peers to demonstrate their competence and thus write their opinions in a more thorough way to explain the rulings that they make.¹⁸ Consistent with their theory, the authors found that minority and female judges write opinions with a more extensive discussion of precedent compared to white male judges. Arguably a Supreme Court majority opinion that more thoroughly explains its reasoning, relying on precedent in a way that includes more extended discussions of the cited legal authority, is more persuasive to key audiences, which include lower courts that must interpret and apply the majority opinion. Not only may the lower court find such opinions more persuasive, but if the Supreme Court more thoroughly discusses precedent, it may be more difficult for lower courts to avoid complying with that precedent through limiting the reach of the precedent or distinguishing the precedent. Thus, when the Supreme Court devotes considerable attention to prior precedent, and thoroughly incorporates its discussion of legal authorities into its opinion, I hypothesize that lower courts will be more likely to comply with Supreme Court majority opinions.

Although judges are advised not to include every case that supports the decision, and, in fact, are specifically told that the opinion “is weakened rather than strengthened by numerous citations,” it is expected that precedent will be cited and “used to fortify the legal propositions advanced.”¹⁹ Thus, I also expect that as the number of Supreme Court precedents cited by the majority opinion increases, lower courts will be more likely to comply with the opinion.

OTHER OPINION ATTRIBUTES

In addition to how thoroughly the Supreme Court majority opinion discusses and relies on precedent and the number of Supreme Court cases cited in that opinion, there are other attributes of opinions that may affect how persuasive the opinion is to lower court judges. These include: clarity/readability; the use of adverbs, intensifiers, and adjectives; passive writing; analytical writing; and degree of certainty.

18. Laura P. Moyer, John Szmer, and Susan Haire, “‘All eyes are on you’: Gender, race, and opinion writing on the US Courts of Appeals,” *Law & Society Review* 55, no. 3 (2021), <https://doi.org/10.1111/lasr.12559>.

19. Joyce J. George, *Judicial Opinion Writing Handbook* (William S. Hein & Co., Inc. 2007), 31.

Clarity/Readability

“Clarity . . . is the most basic quality of good legal writing.”²⁰ In other words, judges should use simple language that the general reader can understand. “There is a place for the elegant word, but it should not be necessary for the reader to have a dictionary at hand while reading the opinion.”²¹ More complex opinions mean that fewer people can understand the judgment or role of the court and the potential danger of the court losing its public voice.²²

There has long been a movement to use plain language in law and regulation and even business.²³ The idea is to use the “simplest, most straightforward way of expressing an idea.”²⁴ “[T]he purpose of communication is to communicate, and this can’t be done if the reader . . . doesn’t understand the words used.”²⁵ It is difficult for a legal opinion to achieve its core function, to persuade, if the reader cannot understand it. One study found that when given two otherwise identical passages seeking a rehearing of a particular matter, one written in “legalese” and the other in simpler English, participants found the plainer style to be much more persuasive.²⁶

Additionally, a clearly written opinion leaves less discretion for the lower court. Spriggs²⁷ found that opinion clarity mattered for agency compliance, and Black et al.²⁸ found that clearer opinions (measured by readability) increased compliance among circuit courts with the Supreme Court. Thus, I hypothesize that lower courts are more likely to comply with opinions that are more readable.

20. Mark Osbeck, “What is ‘Good Legal Writing’ and Why Does it Matter?” *Drexel Law Review* 4, no. 2 (2012): 428, HeinOnline.

21. Federal Judicial Center, *Judicial Writing Manual* (1991), 23.

22. William C. Vickrey, Douglas G. Denton, and Hon. Wallace B. Jefferson, “Opinions as the Voice of the Court: How State Supreme Courts Can Communicate Effectively and Promote Procedural Fairness,” *Court Review: The Journal of the American Judges Association* (2012), <https://digitalcommons.unl.edu/ajacourtreview/396>.

23. David Leonhardt, “Word for Word: The Plain-Language Movement Hacking Through the Thickets of Corporatespeak,” *New York Times*, January 2, 2000, <http://www.nytimes.com/2000/01/02/weekinreview/word-for-word-plain-language-movement-hacking-through-thickets-corporatespeak.html?pagewanted=all&src=pm>.

24. Bryan A. Garner, *Legal Writing in Plain English* (West Publishing, 2001), xiv.

25. Bryan A. Garner, *The Redbook: A Manual on Legal Style* (West Academic Publishing, 2013), 183.

26. Robert W. Benson and Joan B. Kessler, “Legalese v. Plain English: An Empirical Study of Persuasion and Credibility in Appellate Brief Writing,” *Loyola Los Angeles Law Review* 20, no. 2 (1987), HeinOnline.

27. James F. Spriggs II, “The Supreme Court and Federal Administrative Agencies: A Resource-Based Theory and Analysis of Judicial Impact,” *American Journal of Political Science* 40, no. 4 (1996), <https://doi.org/10.2307/2111745>.

28. Black et al., *U.S. Supreme Court and Their Audiences*.

Use of adverbs, intensifiers, and adjectives

Although good legal writing includes writing clearly, many writing experts agree that it does *not* include using adverbs, intensifiers, and adjectives. According to Garner, “adverbs often weaken verbs. Think of the best single word instead of warming up a tepid one with a qualifier.”²⁹ Strunk and White remark that “[i]n experienced writers . . . overwork their adverbs”³⁰ Zinsser states: “Most adverbs are unnecessary. You will clutter your sentence and annoy the reader if you choose a verb that has a specific meaning and then add an adverb that carries the same meaning. Don’t tell us that the radio blared loudly—‘blare’ connotes loudness.”³¹ And according to Justice Anthony Kennedy: “I think adverbs are a cop-out. They’re a way for you to qualify, and if you don’t use them, it forces you to think through the conclusion of your sentence. And it forces you to confront the significance of your word choice, the importance of your diction.”³²

Writing experts also caution against using too many adjectives. “The adjective hasn’t been built that can pull a weak or inaccurate noun out of a tight place.”³³ Zinsser advises to use adjectives sparingly. Specifically, “[m]ost adjectives are . . . unnecessary. Like adverbs, they are sprinkled into sentences by writers who don’t stop to think that the concept is already in the noun.”³⁴ Just like adverbs weaken verbs, adjectives weaken nouns.³⁵

However, adverbs and adjectives are descriptive words that bring writing to life. They give details to writing that cannot be accomplished by using nouns and verbs alone. They add or emphasize information, which can arguably enhance how persuasive an opinion is and thus, the extent to which lower courts will comply with the decision. Judge Gregory Orme argues that adverbs are necessary when making nuanced arguments³⁶ and other legal writers acknowledge that using some adverbs are necessary. “If an athlete loses a game because he played badly, ‘badly’ gives us the helpful information that he didn’t play well.”³⁷ Additionally, writers can use adjectives in a powerful way: “When adjectives are placed in high

29. Bryan A. Garner, *The Elements of Legal Style* (West Publishing, 2002), 200.

30. William Strunk Jr. and E.B. White, *The Elements of Style* (Allyn & Bacon, 1999), 75.

31. William Zinsser, *On Writing Well: An Informal Guide to Writing Nonfiction* (Harper & Row Publishers, Inc. 1980), 102.

32. Bryan A. Garner, “Interviews with United States Supreme Court Justices: Anthony M. Kennedy,” *The Scribes Journal of Legal Writing* 13 (2010): 92-93.

33. Strunk and White, *The Elements of Style*, 71.

34. Zinsser, *On Writing Well*, 103.

35. Garner, *The Elements of Legal Style*, 200.

36. Gregory K. Orme, “The Seven Deadly Sins of Legal Writing,” *Utah Bar Journal* 26, no. 3 (2013).

37. Zinsser, *On Writing Well*, 102-103.

relief, they sometimes serve us well.”³⁸

Legal writing experts also advise writers to avoid intensifiers. An intensifier is a “linguistic element used to give emphasis or additional strength to another word or statement.”³⁹ The most commonly used intensifiers are adverbs ending in –ly, such as clearly and obviously. According to one writing expert: “Clearly is so overused in legal writing that one has to wonder if it has any meaning left.”⁴⁰ The perception is that an argument that includes words such as clearly and obviously is weak.⁴¹ One writing expert noted: “When most readers read a sentence that begins with something like obviously, undoubtedly . . . and so on, they reflexively think the opposite.”⁴² Another wrote: “Because generations of writers have overused words like ‘clearly’ and ‘very,’ these and other common intensifiers have become virtually meaningless. As a matter of fact, they have begun to develop a connotation exactly opposite their original meaning. So many writers (lawyers and judges alike) have used those labels in place of well-reasoned analysis that some readers see these intensifiers as signaling a weak analysis.”⁴³

One study examined whether appellate briefs that used intensifiers are more likely to lose.⁴⁴ The authors examined 400 randomly selected state and federal court civil appellate cases from 2001 to 2003, finding that using intensifiers was correlated with losing. Surprisingly, the authors also found that if an appellate opinion uses a lot of intensifiers, the brief that also uses a lot of intensifiers is more likely to win. The authors theorized that using a high rate of intensifiers was associated with a belief that the brief writers were making a losing argument. The authors conducted another study,⁴⁵ comparing the use of intensifiers in United States Supreme Court majority opinions with dissenting opinions and found that justices used more intensifiers in dissenting opinions, when the authors know they have lost.

However, unlike briefs, where the attorneys may know that they have a weak argument, or dissents, where the justices know they are on the losing side, majority opinion authors have won. And given lower court judges

38. Garner, *The Elements of Legal Style*, 200.

39. Wayne Schiess, “Using Intensifiers is Literally a Crime,” *Michigan Bar Journal* 96, no. 8 (2017): 48.

40. Ann Enquist and Laurel Currie Oates, *Just Writing: Grammar, Punctuation, and Style for the Legal Writer* (Aspen Publishers, 2009), 123.

41. Garner, *The Elements of Legal Style*, 35.

42. Joseph M. Williams, *Style Lessons in Clarity and Grace* (Pearson Education, 2007), 123.

43. Linda H. Edwards, *Legal Writing: Process, Analysis, and Organization* (Aspen Publishers, 2010), 229.

44. Lance N. Long and William H. Christensen, “Clearly, Using Intensifiers is Very Bad—Or Is It,” *Idaho Law Review* 45 (2008), HeinOnline.

45. Lance N. Long and William H. Christensen, “When Justices (Subconsciously) Attack: The Theory of Argumentative Threat and the Supreme Court,” *Oregon Law Review* 91, no. 3 (2013), HeinOnline.

must read, interpret, and apply Supreme Court precedent, majority opinions that use intensifiers strengthen the meaning of other expressions and show emphasis, which arguably is more persuasive to lower courts. Thus, I expect that the more adjectives, adverbs, and intensifiers the majority opinion contains, the more likely the lower court will comply with the opinion.

Passive Writing

When a writer uses active voice, the subject of the sentence does the acting. In contrast, in passive voice, the subject or actor is “passive,” meaning acted upon by someone or something else. Writing experts generally advise writers to use active voice because passive voice is harder to understand.⁴⁶ Passive voice is “generally weaker than active voice.”⁴⁷ Strunk and White state that active voice is generally more direct and concise; however, they do acknowledge that passive voice is sometimes necessary.⁴⁸ According to Justice Sonia Sotomayor, “Each time I see . . . the unnecessary use of the passive voice, I blister.”⁴⁹ Although using the active voice is preferred, there may sometimes be a reason to use the passive voice, such as when the actor is unknown or unimportant, the writer wants to deflect attention, or using the passive voice will aid continuity.⁵⁰ Given that passive voice is generally weaker, wordier, more vague, and less direct, (and thus less persuasive writing) I expect that as the use of passive voice increases, lower courts will be less likely to comply with the majority opinion.

Analytical Writing

Persuasive legal writing reflects analytical thinking. Legal training includes learning to reason analytically. “All through most first and second years in a law student’s studies, her teachers are pounding into her brain a style of thinking, a way to think, to reason analytically. She must analyze, examine, appraise, and evaluate. Such process is vital to . . . thinking like an attorney . . . Skilled attorneys develop precise analytical thinking.”⁵¹ In fact, “legal analysis is the cornerstone of the U.S. judicial

46. Judith D. Fischer, “The Straight Scoop on the Passive Voice,” *Bench & Bar Journal* 74, no. 33 (2010).

47. Bryan A. Garner, “Eliminate Zombie Nouns and Minimize Passive Voice,” *Student Lawyer* 42, no. 9 (2014): 15, HeinOnline.

48. Strunk and White, *The Elements of Style*.

49. William Safire, “Sotomayoralities,” *The New York Times Magazine*, June 15, 2009, <https://www.nytimes.com/2009/06/21/magazine/21FOB-safire-t.html>.

50. Fischer, “The Straight Scoop on the Passive Voice.”

51. Layne Russell, *A Guide to Legal Analysis, Research and Writing* (iUniverse.com, Inc., 2000), 13.

system.”⁵² Thus, I expect that lower courts are more likely to comply with majority opinions that are written analytically as opposed to writing that reflects narrative thinking.

Degree of Certainty

The Court “can firmly endorse rules or they can equivocate”⁵³ In other words, the Court can choose to use words that reflect a high degree of certainty or a low degree of certainty. Lebovits and Hidalgo, when advising law clerks how to draft their first judicial opinion, counsel them to “[b]e definite . . . not tentative,”⁵⁴ and in *The Judicial Opinion Writing Handbook*, judges are likewise advised to “be definite”⁵⁵ Previous research shows that lower courts are more likely to comply with higher court decisions when those decisions are written with a high degree of certainty.⁵⁶ Thus, I expect that as the degree of certainty in an opinion increases, lower courts will be more likely to comply with the opinion.

DATA AND METHODS

To determine whether the depth of cited legal authority in the majority opinion affects compliance by the lower courts, I first identify and collect a random sample of 110 Supreme Court cases from the 1976 through 1986 terms. I exclude plurality opinions from this random sample given that plurality opinions create precedential uncertainty and lower courts are less likely to treat a plurality opinion positively and more likely to treat that opinion negatively or neutrally.⁵⁷ I then identify and examine all of the Circuit Court of Appeals decisions that have interpreted one of the 110 Supreme Court opinions, which includes circuit court cases starting in 1976 and ending in 2005.

For my analysis, I identified 2,771 Courts of Appeals decisions through *Shepard's Citations* via Lexis. *Shepard's* is a legal resource that provides, for each Supreme Court decision, a list of all the subsequent cases (Supreme Court, Courts of Appeals, District Courts, and state courts) that cite the decision. Although *Shepard's* does not capture whether lower courts are ignoring Supreme Court precedent as a means of noncompliance, Benesh and Reddick⁵⁸ found that the Courts of Appeals

52. Beth Walston-Dunham, *Introduction to Law* (Delmar Cengage Learning, 2012), 41.

53. Robert J. Hume, “The Use of Rhetorical Sources by the U.S. Supreme Court,” *Law & Society Review* 40, no. 4 (2006): 817, <https://www.jstor.org/stable/4623348>.

54. Gerald Lebovits and Lucero Ramirez Hidalgo, “Advice to Law Clerks: How to Draft Your First Judicial Opinion,” *Westchester Bar Journal* 36, no. 1 (2009): 35, HeinOnline.

55. George, *Judicial Opinion Writing Handbook*, 27.

56. Corley and Wedeking, “The (Dis)Advantage of Certainty.”

57. Pamela C. Corley, “Uncertain Precedent: Circuit Court Responses to Supreme Court Plurality Opinions,” *American Politics Research* 37, no. 1 (2009), <https://doi.org/10.1177/1532673X08319951>.

58. Benesh and Reddick, “Overruled.”

do not disregard precedent they disagree with. In fact, they did not find a single opinion that overtly ignored the overruling decision.

Dependent Variable

Shepard's offers an editorial analysis indicating how the subsequent decision (the "citing" case) legally interpreted the previous decision (the "cited" case). The goal of *Shepard's* is to ascertain whether the precedent is still good law, or whether it has been diminished based on how it is being treated.⁵⁹ To be judged by *Shepard's*, the subsequent case must contain specific language that legally interprets the cited case.⁶⁰ In other words, a cited case is not considered to be "legally interpreted" just because it is cited. *Shepard's* offers for each citing case the following types of legal interpretations that are relevant to this study: "Question," "Limit," "Criticize," "Distinguish," "Follow," "Explain," or "Harmonize." *Shepard's* labels "Followed" as positive treatment, "Explained" and "Harmonized" as neutral treatment, and "Question," "Limit," "Criticize," and "Distinguish" as negative treatment. Although *Shepard's* codes treatments of precedent in concurring and dissenting opinions, I focus only on treatments that occur in majority opinions.

Shepard's uses "Followed" to indicate that a citing case's majority opinion "expressly" relied on a cited case as precedent.⁶¹ Examples of language that lead to an opinion being coded by *Shepard's* as "Followed" are "controlling," or "determinative" or "such a conclusion is required by."⁶² This is a positive treatment and indicates full compliance by the lower court with the rule of law announced by the Supreme Court. Thus, I code a circuit case that *Shepard's* indicates "Followed" a Supreme Court decision as Positive.⁶³ Consistent with *Shepard's* typology of legal treatment, I code a case that "Questioned," "Limited," "Criticized," or "Distinguished" a Supreme Court decision as Negative, which indicates noncompliance with the Supreme Court case.⁶⁴ Finally, I code a case that

59. Hansford and Spriggs, *The Politics of Precedent on the U.S. Supreme Court*.

60. James F. Spriggs II and Thomas G. Hansford, "Measuring Legal Change: The Reliability and Validity of Shepard's Citations," *Political Research Quarterly* 53, no. 2 (2000), <https://doi.org/10.1177/106591290005300206>.

61. *Ibid.*, at 330.

62. *Ibid.*

63. Prior to 1993, *Shepard's* used the "strongest letter rule" to determine which code to apply if two codes could be applied to the same point of law in the cited case. This rule arranged treatment codes in terms of strength. The order of strength was: "Overruled," "Questioned," "Limited," "Criticized," "Followed," "Distinguished," "Explained," and "Harmonized." Beginning in 1993, *Shepard's* began giving multiple legal treatments to a cited case. In coding the cases used in this study, rather than have multiple legal treatments, I continue using *Shepard's* "strongest letter rule" to determine which code to apply.

64. The *Shepard's* coding scheme categorizes distinguished treatments as weaker negative treatments than treatments coded as criticized or limited. Nevertheless, when the lower court distinguishes a Supreme Court precedent, it explicitly chooses not to apply the precedent. In so doing, the lower court limits the impact of the Supreme Court decision to a narrower set of facts, and thus

“Explained” or “Harmonized” a Supreme Court decision as Neutral. “Explained” indicates that the citing opinion “clarifies, interprets, construes or otherwise annotates the decision in the cited case” and “Harmonized” means “that the cases differ in some way; however, the court has found a way to reconcile and bring into harmony the apparent inconsistency.”⁶⁵

Spriggs and Hansford⁶⁶ empirically tested the reliability of *Shepard’s* analysis of Supreme Court opinions and assessed the validity of *Shepard’s* treatment codes, finding them to be reliable and valid. Specifically, when collapsing the treatment codes into three broad categories—positive treatment, neutral treatment, and negative treatment—they found that the negative treatment code is the most reliable, and the neutral treatment code is the least reliable, although it is still considered reliable. Thus, I categorize the treatments by the circuit courts into three types: Positive treatment, Neutral treatment, and Negative treatment. Because my dependent variable is non-ordered and categorical, I estimate a multinomial logit. (Importantly, I get similar results if I estimate an ordered logit).

Main Independent Variable: Depth of Treatment of Cited Legal Authority

The main independent variable of interest is *Depth of Treatment of Cited Legal Authority*, which is how thoroughly the majority opinion discusses cited legal authorities, specifically United States Supreme Court precedent. I use Westlaw’s KeyCite depth of treatment codes, which categorize the level of attention given to cited cases. If the case contains a “brief reference to the cited case . . . usually in a string citation,” it is coded as “Mentioned.” If the case contains “some discussion of the cited case . . . usually less than a paragraph,” it is coded as “Cited.” “Discussed” means that the citing case “contains a substantial discussion of the cited case . . . usually more than a paragraph but less than a printed page.” And finally, “Examined” is the category for a citing case that “contains an extended discussion of the cited case . . . usually more than a printed page of text.”⁶⁷

For the majority opinions in the dataset, the mean number of Supreme Court precedents that were “examined” was 2.01, with a minimum of 0 and a maximum of 10. The mean number of Supreme Court cases that were “discussed” was 3.00, with a minimum of 0 and a maximum of 16, the mean number of cases that were “cited” was 10.01, with a minimum of

limits the potential impact on future cases, regardless of the motivation of the lower court or whether others would consider the treatment reasonable.

65. Hansford and Spriggs, *The Politics of Precedent on the U.S. Supreme Court*, 44.

66. Spriggs and Hansford, “Measuring Legal Change.”

67. <https://lscontent.westlaw.com/images/banner/documentation/2009/KCataGlance.pdf>.

0 and a maximum of 42, and the mean number of cases that were “mentioned” was 2.86, with a minimum of 0 and a maximum of 17.

In order to measure the depth of treatment, I count the number of Supreme Court precedents that were coded either “discussed” or “examined”⁶⁸ and divide that number by the total number of Supreme Court precedents relied on by the majority; thus, the variable is measuring the proportion of cited cases that were more substantially and extensively discussed by the Supreme Court majority opinion. For the majority opinions in the dataset, the mean depth of treatment was .287, with a minimum of 0 and a maximum of .667. I expect as the proportion of cited cases discussed more in depth increases, lower courts are more likely to positively treat the majority opinion and less likely to negatively treat the majority opinion.

I also control for the *total number of Supreme Court cases* cited by the majority opinion, and my expectation is that the more precedent cited by the Supreme Court—no matter how deeply the discussion—the more likely lower courts will treat the Supreme Court majority opinion positively. A majority opinion that is supported by more precedent is arguably more authoritative and persuasive. The mean number of precedent cited by the majority opinions in the dataset is 17.89, with a minimum of 0 and a maximum of 75.

Other Opinion Attributes

The first independent variable related to other attributes of the content of the majority opinion is *Grade Readability Level*, which measures the reading grade level of the majority opinion. I use the Flesch-Kincaid Grade Level, which is a widely used readability formula which assesses the approximate reading grade level of a text. It takes into account sentence and word counts. The formula is $0.39 (\text{total words}/\text{total sentences}) + (\text{total syllables}/\text{total words}) - 15.59$. The sentence length is based on the average number of words in a sentence and the word length is based on the average number of syllables in a word.⁶⁹ The assumption is that sentences that contain a lot of words are more difficult to follow than shorter sentences and words that contain a lot of syllables are harder to read than words that use fewer syllables.⁷⁰ The mean reading level was of

68. Moyer et al., ““All eyes are on you.””

69. The words per sentence category is based on the number of times that end-of-sentence markers are detected, which includes all periods. However, that means that common abbreviations and legal citations will be counted as multiple sentences unless the periods are removed from the opinions. Thus, I removed the periods from common abbreviations and legal citations using a script created by a computer software developer. This script used pattern matching and regular expressions to identify and remove the periods from the opinions.

70. The Flesch-Kincaid Reading Level was generated by using readable.com. I also used Gunning Fog, Coleman Liau, SMOG, and ARI, and the results were substantially similar.

the majority opinions was 13.45, with a minimum of 11, and a maximum of 18.5.

The next independent variable is the *Percentage of Adverbs, Adjectives, and Intensifiers* used in the majority opinion. I generate this measure using the computer content analysis program Linguistic Inquiry and Word Count (LIWC).⁷¹ LIWC is a dictionary-based program, meaning that it contains lists of words that correspond to separate dictionaries that represent a larger concept. LIWC was developed by psychologists to measure a variety of things, such as expression of emotions, cognitive thought processes, use of pronouns.⁷² Using dictionaries, thesauruses, and questionnaires, an initial selection of words for each category was made by research assistants. Groups of three judges then independently rated whether each word was appropriate for that category. Those category word lists were updated and a word remained in the category list if two out of the three judges agreed it should be included, a word was deleted if at least two judges agreed it should be excluded, and a word was added to the category if at least two of the judges agreed it should be added. That process was then repeated by a separate group of three judges.

Dozens of studies have used indicators from LIWC to explain various phenomena, with these results demonstrating predictive validity. Moreover, LIWC's validity and reliability on a variety of its indicators have been established by several studies.⁷³ For example, Cohen⁷⁴ demonstrates the concurrent validity of LIWC's 'certainty' indicator by showing its correlation with a corpus-based dictionary of cognitive rigidity. In short, LIWC appears to be widely accepted as a text analysis tool.

To create the variable, I first created a custom dictionary in LIWC to measure the percentage of intensifier words in each Supreme Court majority opinion, and I used the most common intensifiers: very, obviously, clearly, patently, absolutely, really, plainly, undoubtedly,

71. I use the 2015 LIWC Dictionary.

72. Yla R. Tausczik and James W. Pennebaker, "The Psychological Meaning of Words: LIWC and Computerized Text Analysis Methods," *Journal of Language and Social Psychology* 29, no. 1 (2010), <https://doi.org/10.1177/0261927X09351676>.

73. Georg W. Alpers, Andrew J. Winzelberg, Catherine Classen, Heidi Roberts, Parvati Dev, Cheryl Koopman, and C. Barr Taylor, "Evaluation of Computerized Text Analysis in an Internet Breast Cancer Support Group," *Computers in Human Behavior* 21, no. 2 (2005), <https://doi.org/10.1016/j.chb.2004.02.008>; Erin O'Carroll Bandum and Jason E. Owen, "Evaluating the Validity of Computerized Content Analysis Programs for Identification of Emotional Expression in Cancer Narratives," *Psychological Assessment* 21, no. 1 (2009), <https://doi.org/10.1037/a0014643>; Shuki J. Cohen, "Construction and Preliminary Validation of a Dictionary for Cognitive Rigidity: Linguistic Markers of Overconfidence and Overgeneralization and their Concomitant Psychological Distress," *Journal of Psycholinguistic Research* 41, no. 5 (2012), <https://doi.org/10.1007/s10936-011-9196-9>; Jeffrey H. Kahn, Renee M. Tobin, Audra E. Massey, and Jennifer A. Anderson, "Measuring Emotional Expression with the Linguistic Inquiry and Word Count," *American Journal of Psychology* 120, no. 2 (2007), <https://www.jstor.org/stable/20445398>.

74. Cohen, "Construction and Preliminary Validation of a Dictionary for Cognitive Rigidity."

certainly, totally, simply, wholly, extremely, quite, blatantly, completely, and highly.⁷⁵ Using *Black's Law Dictionary*,⁷⁶ I removed the following common legal terms from the intensifier list: very heavy work, clearly-erroneous, wholly and permanently disabled, wholly dependent, wholly destroyed, wholly disabled, completely integrated contract, and highly prudent person. Additionally, I modified the Adverbs category in LIWC, removing any previously listed intensifier; thus, this category reflects the percentage of adverbs in the majority opinion, excluding common intensifiers. I then used the category Adjectives in LIWC, which provides the percentage of adjectives in the majority opinion. I added these three categories together to calculate the percentage of each majority opinion that contains adverbs, adjectives, and intensifiers. The values ranged from 3.38 to 8.16, with a mean of 5.16.

Passive Voice is calculated using readable.com, which counts the number of passive words in the document and provides a report of the percentage of words that are passive words. The passive voice mean percentage was 2.26, with a minimum of 1 and a maximum of 4.

The independent variable *Analytic Writing* is a summary variable measured via LIWC that has been re-scaled to reflect a 100-point scale ranging from 0 to 100.⁷⁷ A high number for Analytical reflects formal, logical, and hierarchical thinking and lower numbers reflect more informal, personal, and narrative thinking. Analytical thinking is indicated by the greater use of nouns, articles, and preposition while an informal manner of writing is reflected by using more pronouns, auxiliary verbs (e.g., is, have, was) and common adverbs (e.g., really, so, very) Not surprisingly, majority opinions are generally analytically written, with a mean value of 96, a minimum value of 90.73, and a maximum value of 99.

To measure the *Degree of Certainty*, I use LIWC as well. The LIWC category for certainty includes 113 words, such as always and never. The LIWC program works simply by searching the text for those words and counts their occurrence as a proportion of the total number of words, yielding a percentage for category. In my sample of 110 Supreme Court majority opinions, the certainty category ranges from .51 to 2.46, with a mean of 1.13.

Control Variables

Previous research shows that a number of other factors influence the level of compliance by the lower courts. The first factor is *Age of*

75. See Long and Christensen, "Clearly, Using Intensifiers is Very Bad—Or Is It;" Edwards, *Legal Writing*; Schiess, "Using Intensifiers is Literally a Crime."

76. *Black's Law Dictionary* (Thomson West, 2014).

77. James W. Pennebaker, R.L. Boyd, K. Jordan, and K. Blackburn, "The development and psychometric properties of LIWC2015," Austin, TX: University of Texas at Austin (2015).

Precedent, measured in years. There are two views of how the age of a precedent might figure into the compliance decision, suggesting competing hypotheses. The first view suggests that older decisions have become fundamental to the Court and lower courts would be more likely to follow those cases. The second view argues recent precedents deserve more respect from the lower courts because the Supreme Court is not likely to overturn recently established precedents.⁷⁸ The range for the 110 Supreme Court majority opinions was 0 to 28, with a mean of 8.6.

Research also suggests competing directional hypotheses for the *Complexity* of a case. Wasby⁷⁹ viewed complex decisions as confusing to the lower courts and thus expects them to limit compliance. Alternatively, Johnson⁸⁰ found that complex decisions were followed more often, and Benesh and Reddick⁸¹ viewed complex decisions as fostering higher levels of compliance since they engender a closer reading. For *Complexity*, I count the number of legal provisions relied upon and the number of issues raised in the precedent.⁸² Complexity ranges from 2 to 7, with a mean of 2.4.

I also include the *Ideological Consistency with the Supreme Court Majority Opinion*. Ideology influences lower court judges,⁸³ and as the distance between the ideology of the Supreme Court decision and the members of the deciding appeals court panel increases, the likelihood of the panel treating the precedent positively should decrease. I use the Judicial Common Space score⁸⁴ for each federal court of appeals judge, designated district court judge, and each Supreme Court justice, a measure of personal ideology that places them in the same policy space. I take the absolute value of the difference between the median of the appeals court panel and the median of the precedent's majority coalition. This distance should capture whether the appeals court panel is ideologically consistent with the Supreme Court decision. The range across the dataset is 0 to .95 with a mean of .296.

I also control for case *Importance*. Although some scholars⁸⁵ argue that

78. Brenner and Spaeth, *Stare Indecisus*.

79. Stephen L. Wasby, *The Impact of the United States Supreme Court: Some Perspectives* (The Dorsey Press, 1970).

80. Charles A. Johnson, "Law, Politics, and Judicial Decision Making: Lower Federal Court Uses of Supreme Court Decisions," *Law & Society Review* 21, no. 2 (1987), <https://doi.org/10.2307/3053525>.

81. Benesh and Reddick, "Overruled."

82. Harold J. Spaeth, *The original United States Supreme Court Database, 1953-2005* (2006).

83. Donald R. Songer and Susan Haire, "Integrating Alternative Approaches to the Study of Judicial Voting: Obscenity cases in the U.S. Courts of Appeals," *American Journal of Political Science* 36, no. 4 (1992), <https://doi.org/10.2307/2111356>.

84. Lee Epstein, Andrew D. Martin, Jeffrey A. Segal, and Chad Westerland, "The Judicial Common Space," *Journal of Law, Economics, & Organization* 23, no. 2 (2007), <https://doi.org/10.1093/jleo/ewm024>.

85. See Benesh and Reddick, "Overruled."

important Supreme Court cases are more likely to be followed by lower courts since they are more visible, important cases are also more likely to be controversial, and other scholars⁸⁶ have suggested that deviation from precedent is likely to occur in response to controversial Supreme Court decisions. Thus, I use two measures to tap into the importance of a Supreme Court case. The first is a measure of *Political Importance*, a dichotomous variable coded 1 if the case is a major case using the *New York Times* measure and 0 otherwise.⁸⁷ The second is a measure of *Legal Importance*, also a dichotomous variable, coded 1 if the case struck down a law as unconstitutional or overturned an existing precedent, and 0 otherwise.⁸⁸

Next, I control for the possibility that lower courts sometimes engage in anticipatory behavior. How far away has the Supreme Court moved away from the precedent? The deciding appeals court panel may engage in anticipatory behavior, taking into consideration the ideology of the Supreme Court that is sitting at the time the lower court interprets the precedent relative to that of the Supreme Court that handed down the precedent. This may be because the judges fear reversal by the Supreme Court or because they believe that is their proper role. Klein⁸⁹ found evidence that two federal appellate judges indicated they sometimes engage in anticipatory decision making. In addition, Gruhl⁹⁰ found that federal court decisions were more likely to act in anticipatory compliance. Thus, I control for a *Change in Supreme Court Ideology* and I use the same ideology scores as above and calculate the change in Supreme Court ideology from the time of the precedent by taking the absolute value of the difference between the median of the Court sitting at the time the lower court treats the decision from the median justices that issued the precedent. I expect that, as the distance grows, lower courts will be less likely to treat the Supreme Court case positively. The mean value for this variable is .098, with a minimum value of 0 and a maximum value of .306.

I also account for the *Vitality of Supreme Court Majority Opinion*. Hansford and Spriggs⁹¹ found that lower courts respond to how the

86. See Lawrence Baum, "Lower Court Response to Supreme Court Decisions: Reconsidering a Negative Picture," *Justice System Journal* 3 (1978), HeinOnline; John Gruhl, "The Supreme Court's Impact on the Law of Libel: Compliance by Lower Federal Courts," *Western Political Quarterly* 33, no. 4 (1980), <https://doi.org/10.1177/106591298003300>; Wasby, *The Impact of the United States Supreme Court*.

87. Lee Epstein and Jeffrey A. Segal, "Measuring Issue Salience," *American Journal of Political Science* 44, no. 1 (2000), <https://doi.org/10.2307/2669293>; Lee Epstein, Jeffrey A. Segal, Harold J. Spaeth, and Thomas G. Walker, *The Supreme Court Compendium* (CQ Press, 2007).

88. Spaeth, *The original United States Supreme Court Database*.

89. David E. Klein, *Making Law in the United States Courts of Appeals* (Cambridge University Press, 2002).

90. John Gruhl, "Anticipatory Compliance with Supreme Court Rulings," *Polity* 14, no. 2 (1981), <https://doi.org/10.2037/3234549>.

91. Hansford and Spriggs, *The Politics of Precedent on the U.S. Supreme Court*.

Supreme Court has interpreted its own precedent. If the Court treats a case positively, by following it and declaring it to be good law, then the authority of the case is enhanced. Conversely, if the Court negatively interprets a case, then the authority of the case is diminished. To account for this, for each Supreme Court case decided during the 1976-1986 terms, I use *Shepard's* to identify all subsequent Supreme Court cases that positively or negatively treated it. I then count the number of times the Court's majority opinions interpreted the precedent in a positive or negative manner at the time the lower court treats the decision.⁹² I take the difference between the number of prior positive and negative interpretations, which is the vitality of the majority opinion. Thus, positive values of this variable indicate that the Court has interpreted the precedent positively more often than negatively at the time the lower court treats the decision and negative scores indicate that the precedent has had more negative treatments than positive. I expect that the more often the Court has treated the precedent positively than negatively, the more likely the lower courts will treat the precedent positively. This variable ranges from -3 to 2, with a mean of -.083.

I also control for how much support the opinion has garnered. Thus, I include a variable, which is equal to 1 if the vote in the case is *Unanimous*, 0 otherwise. To control for Supreme Court cases that have been *Overruled*, I include a dummy variable, which is equal to 1 if the case has been overruled by the Supreme Court, 0 otherwise. I use *Shepard's* to identify cases that have been overruled and expect that these cases are less likely to be followed by the lower court.

RESULTS

Table 1 presents the estimates of lower court compliance with Supreme Court majority opinions. The predicted probability of positive treatment by lower courts when all of the independent variables are set at their means or modes is .655, the predicted probability of neutral treatment is .120, and the predicted probability of negative treatment is .225.

92. I exclude "Overruled" from this count because of the following variable. I also exclude from this count any memorandum opinion that interpreted a precedent. If *Shepard's* codes a particular treatment as negatively interpreting a precedent in more than one way, I only count this as one negative interpretation of the Supreme Court precedent. If *Shepard's* codes a treatment both positively and negatively, I include both of these treatments in the counts of Positive and Negative treatments.

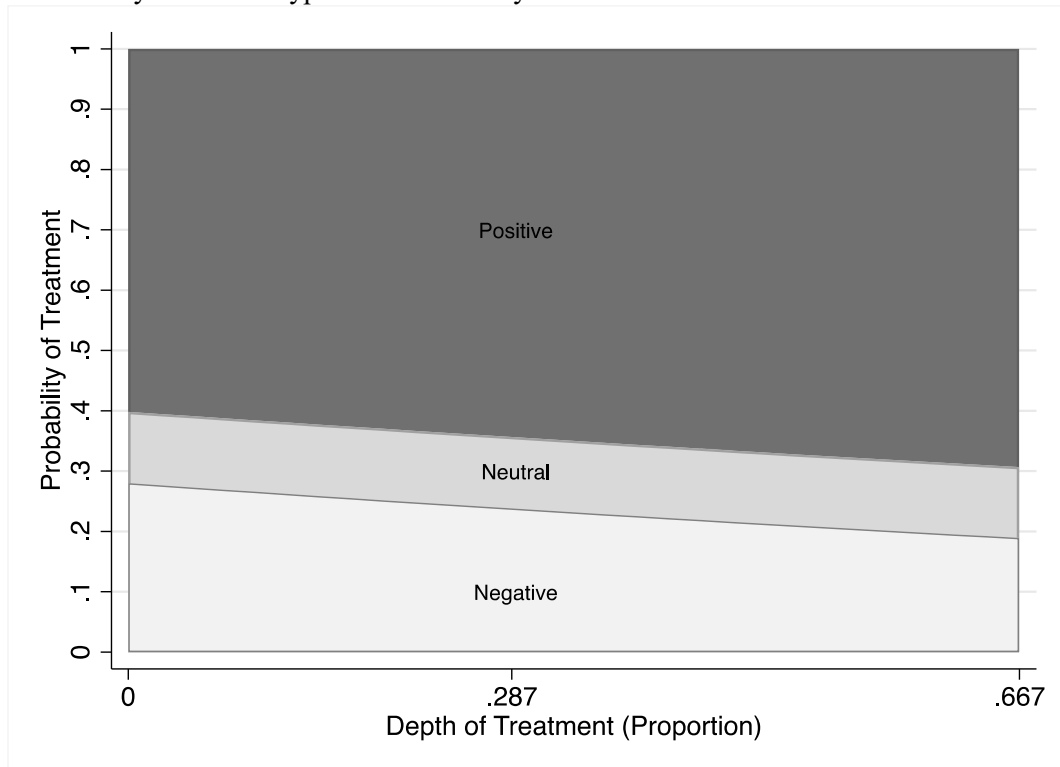
Table 1. Lower Federal Court Compliance with Supreme Court Majority Opinion.

	Comparison: Negative vs. Positive Treatment	Comparison: Neutral vs. Positive Treatment
Depth of Treatment	-.880* (.361)	-.224 (.446)
Total Number of SC	-.010* (.005)	-.007 (.007)
Grade readability level	-.138* (.052)	-.189* (.063)
% of Adv., Adj., and Intensifiers	-.231* (.075)	.109 (.102)
Passive Voice	.274* (.110)	-.005 (.119)
Degree of Certainty	-.635* (.213)	-.482 (.263)
Analytical Writing	-.231* (.039)	-.031 (.047)
Age of Precedent	-.031* (.007)	-.094* (.011)
Complexity	.158* (.069)	.204* (.085)
Ideological Consistency w/SC	.431 (.250)	.184 (.305)
Legal Importance	.907* (.225)	-.246 (.312)
Political Importance	.175 (.166)	-.045 (.221)
Change in Supreme Court	.649 (.630)	2.074* (.775)
Unanimous Opinion	-.036 (.137)	.068 (.161)
Overruled	.553 (.654)	.552 (1.181)
Vitality of Supreme Court	-.297* (.060)	-.133 (.096)
Constant	24.022* (3.912)	3.788 (4.776)

N = 2,771; * p < .05 (two-tailed tests). Fixed effects for circuit not reported.

As expected, as the Supreme Court majority opinion discusses legal authority more thoroughly, lower courts are more likely to positively treat the majority opinion and less likely to treat the majority opinion negatively. However, the coefficient for neutral treatment is not statistically significant, suggesting that the depth of discussion does not influence whether the lower court is less likely to treat the opinion neutrally. Specifically, as the depth of discussion increases by one standard deviation above the mean, the probability of positive treatment goes from .655 (the baseline) to .674, an increase of 2.9 percent, and the probability of negative treatment drops from .225 (the baseline) to .206, a decrease of 8.44 percent. When the depth of discussion is at its highest, indicating that the Supreme Court majority opinion extensively addresses cited legal authority, compared to when the variable is at its lowest, indicating that the Supreme Court majority opinion only references cited legal authority, the probability of positive treatment increases from .614 to .703 (an increase of 14.5 percent) and the probability of negative treatment decreases from .265 to .178 (a decrease of 32.83 percent). Figure 1 displays the predicted probabilities of the three types of treatment based on the depth of discussion of cited legal authority, holding the other variables at their mean or modal values. Each shaded region corresponds to a different treatment: positive, neutral, and negative. Figure 1 illustrates that as the depth of discussion increases, the probability of a positive treatment increases while the probability for a negative treatment decreases. Thus, the results suggest that majority opinions that more thoroughly explain their reasoning by including more extended discussions of cited legal authority are more persuasive to lower courts that are tasked with interpreting and applying those majority opinions.

Figure 1. Predicted Probabilities of Relationship Between Depth of Cited Legal Authority and Each Type of Treatment by Lower Courts.



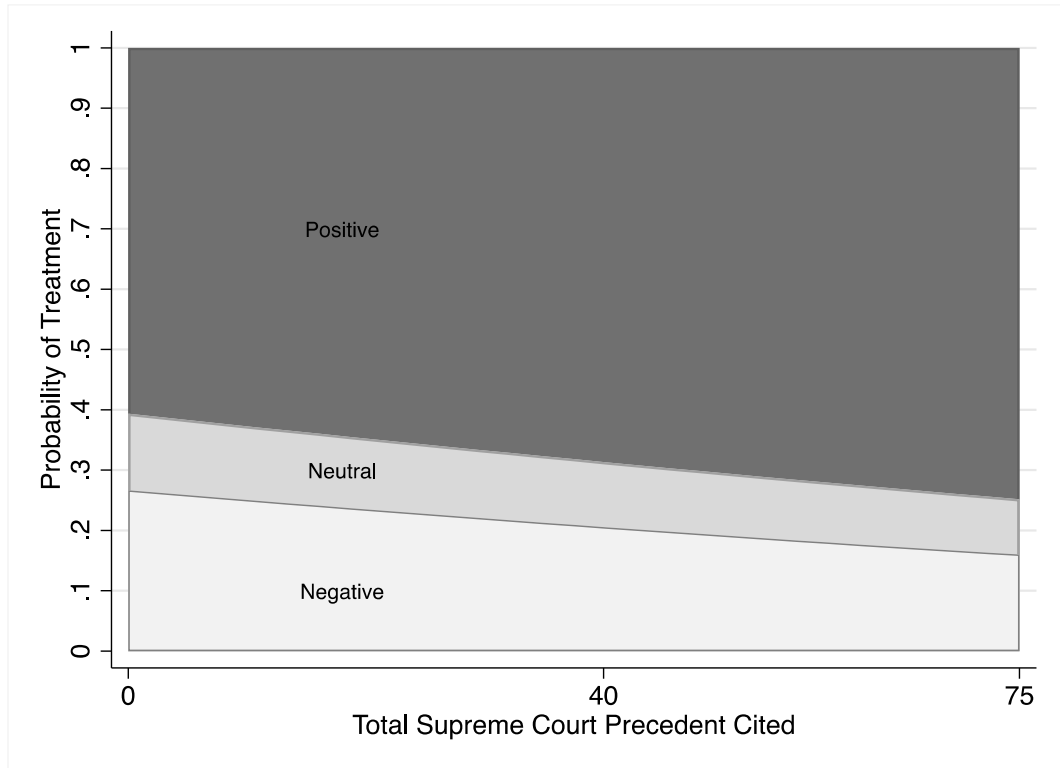
Note: The figure represents the cumulative predicted probability of treatment by the lower court, where each shaded region indicates the probability of receiving that specific type of treatment (e.g., positive, neutral, or negative) as it changes based on the depth of cited legal authority relied on by the Supreme Court majority opinion. Figure was generated with the SPost commands.⁹³

In addition to the depth of treatment, the number of Supreme Court precedents cited, no matter how thoroughly discussed by the majority opinion, correlates with lower court compliance. As the number of precedent cited is at its minimum (0) versus its maximum (75), the probability of positive treatment by lower courts increases from .619 to .757, an increase of 22.29 percent, and the probability of negative treatment decreases from .252 to .150, a decrease of 40.48 percent. Figure

93. Scott J. Long and Jeremy Freese, *Regression Models for Categorical Dependent Variables Using Stata* (Stata Press, 2006).

2 illustrates this relationship.

Figure 2. Predicted Probabilities of Relationship Between Total Number of Supreme Court Precedents Cited and Each Type of Treatment by Lower Courts.



Note: The figure represents the cumulative predicted probability of treatment by the lower court, where each shaded region indicates the probability of receiving that specific type of treatment (e.g., positive, neutral, or negative) as it changes based on the depth of cited legal authority relied on by the Supreme Court majority opinion. Figure was generated with the SPost commands.⁹⁴

Surprisingly, as the reading grade level goes up, meaning the majority opinion is more difficult to read, lower courts are less likely to treat the majority opinion negatively or neutrally and more likely to treat the majority opinion positively. Specifically, as the reading grade level increases by one standard deviation above the mean, the probability of positive treatment goes from .655 to .690, an increase of 5.34 percent. The probability of negative treatment drops to .206 from .225, a decrease of

94. Long and Freese, *Regression Models for Categorical Dependent Variables Using Stata*.

8.44 percent and the probability of neutral treatment decreases from .120 to .105, a decrease of 12.5 percent. When the reading grade level is at its highest compared to its lowest, the probability positive treatment increases from .563 to .805, an increase of 42.98 percent.

Although previous research has shown that readability leads to higher compliance, that study did not remove the periods from the legal citations and other abbreviations, nor did it control for any other aspect of opinion content. Majority opinions written at a high grade reading level may be more difficult to read; however, circuit court judges who must interpret and apply the opinions are legally trained to read and understand court opinions.

The results also show that as the percentage of adverbs, adjectives, and intensifiers increase, lower courts are more likely to treat the majority opinion positively and less likely to treat that opinion negatively. However, the coefficient for neutral treatment is not statistically significant, suggesting that using descriptive writing does not influence whether the lower court is less likely to treat the opinion neutrally. Specifically, as the percentage of adverbs, adjectives, and intensifiers increases by one standard deviation above the mean, the probability of positive treatment goes from .655 to .671, a modest increase of 2.44 percent. The probability of negative treatment drops to .196 from .225, a decrease of 12.89 percent. When the percentage of adverbs, adjectives, and intensifiers is at its highest compared to its lowest, the probability of positive treatment increases from .599 to .701, an increase of 17.03 percent, and the probability of negative treatment decreases from .310 to .120, a decrease of 61.29 percent.

Although writing experts caution against the overuse of adverbs, adjectives, and intensifiers, the results show that majority opinions using these words are conveying more information through descriptive language, and perhaps even limiting the lower court's discretion by using such words as absolutely, obviously, and clearly. Thus, although certain linguistic features may not fall into the "ideal" legal writing parameters, they may be quite effective when it comes to enhancing compliance.

As expected, the majority's use of passive voice decreases compliance, with the probability of positive treatment by lower courts decreasing as the percentage of passive words increases and the probability of negative treatment increasing. As the percentage of passive words used in the majority opinion increases to one standard deviation above the mean, the probability of positive treatment decreases from .655 to .632 (3.51%) and the probability of negative treatment increases from .225 to .252 (12%). When the percentage increases from its minimum to maximum, the probability of negative treatment increases from .170 to .319 (87.65%) and the probability of positive treatment decreases from .700 to .576 (17.71%).

The coefficient for degree of certainty is statistically significant in the expected direction. As the level of certain language in the majority opinion increases, circuit courts are more likely to treat the majority opinion positively and less likely to treat that opinion negatively. Specifically, as the degree of certainty increases by one standard deviation above the mean, the probability of positive treatment goes from .655 to .691, an increase of 5.5 percent. When the certainty score is at its highest compared to its lowest, the probability of positive treatment increases from .569 to .804, an increase of 41.30 percent, and the probability of negative treatment decreases from .290 to .119, a decrease of 58.97 percent. These results suggest that the Supreme Court can lessen discretion and therefore increase compliance by using more certain, authoritative language in its opinions.

Finally, as the analytic score of the majority opinion increases, lower courts are more likely to positively treat and less likely to negatively treat the precedent. When the analytic score is one standard deviation above the mean, the probability of positive treatment increases from .655 to .707 (7.94%) and the probability of negative treatment decrease from .225 to .170 (24.44%). When the score is set at its maximum value versus its minimum value, the probability of positive treatment increases from .417 to .745 (78.66%), and the probability of negative treatment decreases from .492 to .130 (73.58%). This suggests that lower courts are more persuaded, and/or perhaps have less discretion, when majority opinions are written in a way that reflects formal, logical, and hierarchical thinking.

The model also includes a series of control variables and there are several variables related both to increased negative treatment and neutral treatment.⁹⁵ The results of this study show that the age of the Supreme Court precedent has a positive impact on lower court compliance. As precedents age, lower courts are less likely to treat a Supreme Court decision negatively and neutrally. If the Supreme Court precedent is approximately fifteen years old (one standard deviation above the mean) compared with eight years old (the mean), the probability of positive treatment goes from .655 to .729, an increase of 11.3 percent. Thus, the results suggest that older decisions have become fundamental and lower courts are more likely to follow those decisions and less likely to negatively interpret those decisions.

In addition, as the vitality of the Supreme Court majority opinion increases, lower courts are less likely to treat the case negatively and more likely to treat the case positively. If the Supreme Court has treated its own

95. Although Table 1 does not report the circuit court dummy variables, the Third and the Ninth circuits are more likely to treat Supreme Court cases negatively than the First circuit, and the Fifth and Seventh circuits are more likely to treat Supreme Court cases neutrally than the First circuit.

precedent more positively than negatively (one standard deviation above the mean), the probability of lower court compliance increases by 6.41 percent (.655 to .697).

More complex cases are more likely to be treated negatively or neutrally than positive, while legally important cases are more likely to be treated negatively than positively. With respect to changes in Supreme Court ideology, as the Supreme Court's ideology shifts from the time the Court issued the precedent to the time when the lower court treats the decision, the odds of the lower court neutrally treating the case rather than positively treating the case increase. This result suggests that the lower court is treating the case in a less positive manner when the Supreme Court has moved away from the precedent. However, the case still stands as precedent, which means that the appeals court panel is not more likely to negatively treat the case. Thus, it appears that the circuit courts are somewhat engaging in anticipatory behavior.

CONCLUSION

"Opinion writing is public writing of the highest order; people are affected not only by judicial opinions but also by how they are written."⁹⁶ Given that the judiciary's power comes from its words alone, it is important to understand how the content of the Supreme Court opinions can potentially influence the extent to which lower courts comply with those decisions.

My central argument is that persuasive Supreme Court opinions encourage implementation by lower courts and subsequently increase the Court's ability to impact legal policy. Specifically, I argue that persuasive opinions contain an extensive discussion of cited legal authorities and that lower courts are thus more likely to comply with those opinions. The results support that theory, showing that lower courts are more likely to positively treat and less likely to negatively treat Supreme Court majority opinions that more thoroughly discuss cited legal authority. In addition to how thorough the cited precedents are discussed by the majority opinion, the number of authority cited increases compliance by lower courts. Thus, if the justices wish to write opinions that minimize noncompliance by lower courts, justices will write majority opinions filled with Supreme Court precedents that are extensively discussed.

Additionally, the results show that there are other opinion writing features that enhance or diminish compliance by lower courts. Lower courts are more likely to positively treat Supreme Court precedents when the majority opinions are written at a higher reading grade level, contain a

96. Gerald Lebovits, Alifya V. Curtin, and Lisa Solomon, "Ethical Judicial Opinion Writing," *Georgetown Journal of Legal Ethics* 21 (2008): 237, HeinOnline.

higher percentage of descriptive words (e.g., adverbs, adjectives, and intensifiers), are analytically written, and are written with words that convey a higher degree of certainty. On the other hand, lower courts are less likely to positively treat majority opinions that are written using passive voice. These results suggest that Supreme Court justices, when crafting opinions, have the ability to influence the degree of compliance by lower courts. Appreciating the many linguistic features of opinion writing provides a greater understanding of the connection between the language of court opinions and compliance.

Additionally, this research corroborates the value of using computerized text analysis to understand judicial opinions. Much can be learned by employing computer-based text analysis programs, such as the LWIC software used here. The introduction of systematic research into the study of judicial process will provide more insight into how the law is crafted and its impact on different audiences.