
The (Dis)Advantage of Certainty: The Importance of Certainty in Language

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How can legal decision makers increase the likelihood of a favorable response from other legal and social actors? To answer this, we propose a novel theory based on the certainty expressed in language that is applicable to many different legal contexts. The theory is grounded in psychology and legal advocacy and suggests that expressing certainty enhances the persuasiveness of a message. We apply this theory to the principal-agent framework to examine the treatment of Supreme Court precedent by the Federal Courts of Appeal. We find that as the level of certainty in the Supreme Court's opinion increases, the lower courts are more likely to positively treat the Court's decision. We then discuss the implications of our findings for using certainty in a broader context.

How can political and legal decision makers increase the likelihood of a favorable response from other actors? Scholars have identified several mechanisms. Presidential administrations can control resources to exert influence on independent regulatory commissions (Moe 1982). Presidents can staff agencies with appointees who will remain ideologically compatible (Wood & Waterman 1991). Congress can monitor bureaucratic agencies by responding to “fire alarms” (McCubbins & Schwartz 1984) and can constrain federal judges by passing statutes with more detailed language (Randazzo, Waterman, & Fine 2006). Courts can achieve higher compliance from executive agencies by writing clear and explicit opinions (Spriggs 1996) and can encourage positive treatment from lower courts when they speak with a unified voice in the form of a unanimous opinion (Benesh & Reddick 2002). Within the courtroom, litigants and witnesses can increase their credibility, competency, and trustworthiness if they testify in a “style

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characteristic of high-status people” (Black 1989: 18). Given that policymaking typically requires some level of cooperation from another political actor, a vital question facing legal actors is how to ensure a favorable response to their decisions.

We argue that a basic but unrecognized tool is available to policy makers; it involves the certainty or “authoritativeness” of language. Language is important because it is the primary way that political and legal actors communicate with each other. Moreover, institutional and legal actors primarily communicate with each other using written language, which means the receiver of the communicated message must interpret the language before responding to it. Thus, we argue that by varying the degree of certainty or authority expressed in the language, the sender of the message has an opportunity to enhance the favorability of the response.

We apply this theory to a principal–agent framework. Specifically, we examine U.S. Supreme Court opinions, analyzing how lower courts respond to Supreme Court precedents based on the variation in the degree of certainty expressed in Court opinions, though we should note that our findings hold larger implications for use of certainty in other legal settings, which we discuss more at the end. A key part of this hierarchical relationship—or principal–agent relationship—concerns the relevance of “stare decisis.” It requires lower courts to defer to support the outcome and reasoning established by a higher court, irrespective of their preferences. As the Supreme Court has stated, “unless we wish anarchy to prevail within the federal judicial system, a precedent of this Court must be followed by the lower federal courts no matter how misguided the judges of those courts may think it to be” (*Hutto v. Davis* 1982: 375). Yet, several studies show that lower courts’ treatment of Supreme Court precedent is far from perfect, with lower courts citing some precedents positively while citing others negatively (e.g., Hansford & Spriggs 2006; Johnson 1979). This suggests there may be something different across opinions—related to the language of the opinion—that enhances or mitigates the response. Understanding this difference becomes vital because the legal reasoning underlying a particular decision is crucial in determining its precedential value and in understanding the evolution of the law. In fact, Spriggs (2003) argues that justices care more about substantive policy outcomes and observes that the bargaining over opinions is largely concerned with the language of the opinion. We suggest that the degree of certainty expressed in the opinion is a strong indicator of how lower courts treat Supreme Court precedents.

In this article, our goal is to understand the extent to which the language of the majority opinion influences how that opinion is

treated by the lower courts. Do lower courts respond to the content of court opinions? Specifically, if the language of the opinion is more authoritative, are lower courts more likely to positively treat that opinion? In order to answer these questions, we utilize linguistic software designed to assess the certainty—or the authoritativeness—of the words used by the justices. Specifically, we use the certainty of the language expressed in the opinion to capture the authoritativeness of the opinion.¹ Our approach expands on the growing trend in empirical legal scholarship to employ computer content analysis to understand judicial decisionmaking (e.g., Black et al. 2011; Corley 2008; Owens & Wedeking 2011; Wahlbeck, Spriggs, & Sigelman 2002). It also has the benefit of taking opinion content seriously, and directly links the content of Court opinions to lower court policy outcomes. Additionally, this research further informs our understanding of how the courts of appeals treat Supreme Court opinions, a significant topic given that the courts of appeals are the de facto courts of last resort in the federal system (Hettinger, Lindquist, & Martinek 2006). We find that the language used in the majority opinion does influence the extent to which the lower courts positively treat Supreme Court precedent. Specifically, we find that as the authoritativeness of the words used in the majority opinion increases, the lower courts are more likely to positively treat the Supreme Court decision. Importantly, we believe our findings about the influence of the language are portable to other broader contexts.

Language and Persuasion

We propose studying the importance of certainty through the principal–agent framework. Principal–agent models were initially developed to examine questions of incomplete information and risk sharing, eventually were applied to organizational theory in economics, and subsequently introduced into other fields (Moe 1984). This approach, which treats the Court as the principal and the Courts of Appeals as the agent, is common within the courts literature (e.g., Benesh 2002; George & Yoon 2003; Songer, Segal, & Cameron 1994).² Furthermore, courts that are subordinate to the

¹ Common synonyms for authoritativeness are commanding, confident, decisive, assertive, and self-assured. Thus, we use the terms authoritative and certainty interchangeably.

² We recognize that viewing the Supreme Court and the federal Courts of Appeals through a principal–agent lens is not the only way to analyze their relationship. Accordingly, while acknowledging the principal–agent framework has some merit, though certainly not without flaws, Kim (2011) also notes that judges share a common goal—the production of law itself. Specifically, “[l]aw is the joint product of judicial efforts at all levels of the hierarchy, but it is also inevitably the ground for contestation over policy choices”

Supreme Court are “subject to an absolute duty to follow its precedents” (Kim 2007). However, lower federal courts still retain discretion when deciding cases and we argue that a persuasively written opinion is more likely to lead to positive treatment.

An appellate opinion must be written persuasively. Writing a persuasive opinion can hold together a majority coalition or enhance the reputation of the opinion (and its author) in the legal community (Hume 2006). Additionally, Supreme Court justices wish to write legally strong, persuasive opinions because they desire to produce good law and good policy and in order to be cast in as favorable a light as possible (Corley, Collins, & Calvin 2011).

Finally, a strong, persuasive opinion can enhance the extent to which opinions are implemented by lower courts. “To properly communicate the disposition of a case the judge must enable the reader to understand and accept the judge’s decision. Thus the document communicating that decision must be clear and persuasive” (George 2007: 4). The success of this persuasive attempt is largely based on the ability to distinguish opinion from fact and portray assertions in persuasive ways. The Court “can firmly endorse rules or they can equivocate . . .” (Hume 2006: 817). In other words, the Court can choose to use words that reflect a high degree of certainty or a low degree of certainty.³ Thus, we argue a key feature of an opinion’s level of certainty, or “authoritativeness,” stems from the language used in the content of the opinion. Judges wield enormous power in shaping the law and influencing society and, accordingly, “there is pressure on them to speak decisively” (Solan 1993: 2). Specifically, judges are taught that opinions “should . . . carry conviction . . .” (Federal Judicial Center 1991: 19).⁴

This argument is supported by empirical research that finds more assertive messages to be more persuasive (Hazelton, Cupach,

(Kim 2011: 572–73). Thus, there are elements of cooperation and conflict, which most legal scholars do not explore. Moreover, as Kim (2007) points out, this hierarchy also presents the possibility of lower court judges legitimately exercising their discretion, which should not necessarily be viewed as “shirking.”

³ Importantly, the literature suggests that certainty and clarity are different aspects. For example, Hazelton, Cupach, and Liska (1986) differentiate between assertiveness and ambiguity. Miller and Peterson (2004) suggest certainty is just one indicator of attitude strength. Furthermore, Petrocelli, Tormala, and Rucker (2007) show that attitude certainty has two theoretically and empirically separated aspects. The first is clarity, the sense that one knows what one’s attitude is, and the second is correctness, the sense that one’s attitude is correct or valid.

⁴ However, Posner (2009: 256) has argued the following: “One judicial opinion might be better than another not because the argument was more persuasive but because by candidly disclosing the facts and authorities tugging against its result, by being tentative and concessive in tone, even by confessing doubt about the soundness of its result, it was a more credible, a more impressive judicial document.”

& Liska 1986; Sniezek & Buckley 1995). This then begs the question, why is certainty important for persuasiveness? Yates et al. (1996) attribute part of the answer to extremeness as an indicator of competence when they found that consumers *prefer* sources that make extreme confidence judgments. In addition, Sniezek and Van Swol (2001) find that principals who express more confidence are trusted more, even when the agent has less expertise, and this leads to their advice being followed more often. In sum, source certainty is important because it helps resolve that decision maker's cognitive burden.⁵

When viewed from the perspective of persuasion then, certainty is relevant and important in judicial opinions 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” (Higdon 2010: 1242). Furthermore, the persuasive power of courts is integral for judicial effectiveness because it is the only leverage courts have (see Baird & Javeline 2007). Given that courts must rely on other actors to implement their decisions, possessing neither the power of the purse nor the sword (Hamilton 1788, Federalist Paper 78), courts instead must rely on their persuasive power, which encourages implementation of their decisions.

What are the elements of persuasive legal argument? Gardner (1993) argues that one of the key strategies is “to create the impression that *the judge has no choice*” (54, emphasis in original). While Gardner admits that judges exercise discretion, he is quick to point out that judges do not like to exercise discretion because it increases the difficulty of the choice (i.e., increases the cognitive burden on the judge). As part of his formula, one of Gardner's key principles is “Establishing Certainty of Authoritativeness” (1993: 55).

Gardner's advice is joined by many others. Rieke and Stutman (1990), in their book on communication in legal advocacy, spend an entire chapter on source credibility where some of the key components are the assertiveness and confidence of the message. For

⁵ This does not suggest, however, that justices can artificially inject their opinions with rhetoric that oozes certainty. There are limits. Specifically, consumers (i.e., lower court judges) will still desire a strong explanation to accompany the certainty (e.g., Yates et al. 1996). In addition, there must be some variation in the certainty of recommendations, otherwise certainty will lose its value (i.e., certainty all the time will become meaningless). Furthermore, legal convention suggests practical constraints, such as one of Supreme Court justice Antonin Scalia's proposed principles of argumentation for persuading judges. Scalia recommends lawyers to “[n]ever overstate your case. Be scrupulously accurate” (Scalia & Garner 2008: 13). Finally, recent research suggests there is value in having a vague opinion because it enables judges to manage their uncertainty over policy outcomes, where vague opinions enable judges to mask noncompliance (Staton & Vanberg 2008). Thus, there may be some conditions where judges value less certainty in their opinions.

example, Rieke and Stutman write, “when receivers perceive a source to be confident, they confer the source higher credibility” (1990: 120). But this advice is not limited to a handful of texts. Rather, advice like it can be found in almost any guide to legal advocacy or writing. For example, Waicukauski, Sandler, and Epps (2001) write on the importance of a speaker’s “ethos,” which is the Greek word for character or credibility, and argue for the importance of “Convey[ing] your Conviction” (2001: 41). Finally, Lebovits and Hidalgo (2009), advising law clerks how to draft their first judicial opinion, counsel them to “[b]e definite . . . not tentative” (35) and in *The Judicial Opinion Writing Handbook*, judges are advised, when writing opinions, to “be definite. . . .” (George 2007: 27). Importantly, while we focus on judges, this is not limited to judges. In his sociological look at the justice system, Black (1989) finds that how litigants and witnesses speak in court matters for their success and credibility in front of judges and juries. Thus, we argue that the more certainty expressed in Supreme Court opinions, the more persuasive those opinions will be, leading to an increase in compliance.

Although previous scholars have used different measures to capture the authoritativeness of a Supreme Court decision, including whether it was unanimous, whether it was a minimum winning coalition decision, the size of the voting majority, the number of dissenting justices, the number of dissenting opinions, and the number of special concurring opinions (Benesh & Reddick 2002; Hansford & Spriggs 2006; Johnson 1979),⁶ those measures have neglected an important feature of our legal system—the content of the opinion. In sum, by using a higher degree of authoritative language in the opinion, the opinion is more likely to be persuasive. This leads to the following hypothesis: As the degree of certainty in an opinion increases, lower courts will be more likely to interpret the precedent positively than negatively or neutrally.

Data and Method

To determine whether the language of the opinion affects the treatment of Supreme Court precedent by the lower courts, we identify and examine lower court treatments of a random sample of

⁶ Johnson (1979) tried many different measures and found that the degree of Supreme Court support or nonsupport for a particular case has virtually no influence on how the lower courts treat that case. Along the same lines, Hansford and Spriggs (2006) find that the size of the majority coalition and the number of special concurring opinions accompanying the precedent do not influence the lower courts’ treatment of the precedent. In contrast, Benesh and Reddick (2002) find that lower courts are more likely to positively treat unanimous decisions.

110 Supreme Court cases from the 1976 to 1986 terms.⁷ The unit of analysis is a Court of Appeals decision that has interpreted one of our 110 Supreme Court opinions, which includes circuit court cases from 1976 to 2005. For our analysis, we identified 2,772 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, Benesh and Reddick (2002) find that the Courts of Appeals do not disregard precedent they disagree with. In fact, they did not find a single opinion that overtly ignored the overruling decision.⁸

Dependent Variable

Important for purposes here, *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 (Hansford & Spriggs 2006). To be judged by *Shepard's*, the subsequent case must contain specific language that legally interprets the cited case (see Spriggs & Hansford 2000). In other words, a cited case is not considered to be "legally interpreted" just because it is cited.⁹ *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

⁷ We 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 (see Corley 2009).

⁸ Specifically, Benesh and Reddick (2002) analyzed Courts of Appeals treatment of Supreme Court alterations of precedent. They identified common West Key numbers between the overruled and overruling decisions, ascertaining the issues that were the basis of the overruling. Then they obtained every lower court decision under those keys from the year of the overruling decision to 1999. Out of the thousands of cases generated, they examined a sample of those to determine if the lower courts were ignoring the change in precedent. They did not find a single opinion that overtly ignored the overruling decision.

⁹ If a citing case refers to a cited case but no treatment code is provided, this means the citing case referenced but did not legally treat the cited case. This is coded as a nonsubstantive treatment of a cited case, which we do not include.

dissenting opinions, we 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 (Spriggs & Hansford 2000: 330). 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" (Spriggs & Hansford 2000: 330). Thus, we code a circuit case that *Shepard's* indicates "Followed" a Supreme Court decision as positive.¹⁰ Consistent with *Shepard's* typology of legal treatment, we code a case that "Questioned," "Limited," "Criticized," or "Distinguished" a Supreme Court decision as negative.¹¹ Finally, we code a case that "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" (Hansford & Spriggs 2006: 44).

Spriggs and Hansford (2000) 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 (see also Hansford & Spriggs 2006). 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, we categorize the treatments by the circuit courts into three types: positive treatment, neutral treatment, and negative treatment. In our data, 62 percent of the cases received positive treatment, 13 percent received neutral treatment, and 25 percent received negative treatment. Because our dependent variable is nonordered and categorical, we estimate a multinomial logit

¹⁰ 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 (Spriggs & Hansford 2000). 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, we continue using *Shepard's* "strongest letter rule" to determine which code to apply.

¹¹ 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 limits the potential impact on future cases, regardless of the motivation of the lower court or whether others would consider the treatment reasonable.

(importantly, we get similar results if we estimate an ordered logit).¹²

Primary Independent Variable

Our main independent variable, *degree of certainty*, measures the degree of certainty expressed in the majority opinion. We generate this measure using the computer content analysis program Linguistic Inquiry and Word Count (LIWC). LIWC is a dictionary-based program, meaning that it contains lists of words that correspond to separate dictionaries that represent a larger concept. Specifically, we use LIWC's dictionary for "certainty," which we explain more fully below. LIWC was developed by psychologists to measure a variety of things, such as expression of emotions, cognitive thought processes, use of pronouns, as well as several others (Tausczik & Pennebaker 2010). 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 (e.g., Alpers et al. 2005; Bandum & Owen 2009; Cohen 2012; Kahn et al. 2007). For example, Cohen (2012) demonstrates the concurrent validity of LIWC's "certainty" indicator by showing that it correlated with a corpus-based dictionary of cognitive rigidity. In short,

¹² This raises two issues. First, one might alternatively consider the three categories as a set of ordered choices: positively treat > neutrally treat > negatively treat. However, it is not clear that the dependent variable is ordinal (e.g., is a negative treatment always more deleterious than a neutral treatment?). When there is uncertainty whether the dependent variable should be considered ordinal, multinomial logit is appropriate (Long 1997). To be confident, we also estimated an ordered logit model and the results are substantively the same as those produced by the multinomial logit model (i.e., certainty increases positive treatment). Second, use of a multinomial logit requires us to make the assumption of the independence of irrelevant alternatives (IIA), which requires that the categories of our dependent variable cannot be plausible alternatives for one another. Given the clear substantive differences across the categories, we think this is a plausible assumption. While this assumption can be tested with the Hausman–McFadden or Small–Hsiao tests, we note that Long and Freese (2006: 243–44) specifically counsel *against* using them. Nonetheless, we ran the tests where they met the assumptions and all supported the conclusion that the alternatives are independent.

LIWC appears to be widely accepted as a text analysis tool. We should note, however, as with any linguistic software program, LIWC has its limitations.¹³

The 2007 LIWC dictionary for the concept “certainty” contains 83 words. Some examples include: absolutely, always, certain*, clearly, commit, completely, every, exact*, extremely, forever, indeed, inevitab*, must, never, perfect*, positiv*, precis*, totally, truly, undeniab*, undoubt*, unquestion*, where the asterisk allows the program to count any variation of the word with that stem. Appendix A contains the full list of words.¹⁴ The LIWC program works simply by searching the text for these words and counts their occurrence as a proportion of the total number of words, yielding a percentage for each category. In our sample of 110 Supreme Court cases, the certainty category ranges from .61 to 2.34, with a mean of 1.25 and standard deviation of 0.323. Higher values are theorized to measure higher levels of certainty expressed by the writer. While these percentages may seem small at first glance, they

¹³ For example, the website for LIWC—<http://www.liwc.net>—frankly admits that assessing the reliability and validity of text analysis output is “tricky” and is not the same as with questionnaires. Furthermore, because it is a dictionary-based program, it does not capture all nuances of communication—it ignores context, irony, and sarcasm. It will also miss homonyms and double entendres. Additionally, judicial opinions are a unique form of written language, written with a specific format and structure by people with specialized training, and thus some of the tools of linguistic analysis are only in the beginning stages of being applied to the evaluation of legal opinions. To be sure, this does not mean the program cannot be used on legal texts, as one of its primary creators—James Pennebaker—has a recent working paper that applies LIWC to Supreme Court opinions (Cross & Pennebaker 2012). Despite these limitations, we think it worthwhile to mention that there is no current program available that is able to capture *all* of the relevant elements of judicial opinions. And combined with the fact that it is important to understand whether different linguistic styles make opinions more or less powerful, we think LIWC has something beneficial to offer.

¹⁴ In addition to the 2007 dictionary, LIWC also contains a 2001 dictionary that contains only 25 words in the certainty category. Although we present the results from the 2007 dictionary, we also include the results from using the 2001 dictionary in Appendix A. Importantly, the results from either dictionary support our hypothesis (increases in certainty result in more positive treatments by lower courts). The only relevant difference in the findings involves a small change involving the coefficients for the neutral treatment category. One important consideration in choosing whether to use the 2001 or 2007 dictionary is *where* one prefers to reduce measurement error: Using a larger number of words (i.e., 2007 LIWC dictionary) will undoubtedly capture more raw instances of certainty in text, but it will also increase the number of “false positives” (type 1 errors). Type 1 errors are instances where a word is counted in the certainty index when it does not actually indicate certainty. In contrast, using a smaller number of words (i.e., 2001 LIWC dictionary) will undoubtedly capture fewer raw instances of certainty in text, but it will also decrease the number of “false positives” though it also increases the number of “false negatives” (type 2 errors), instances where a word is not counted in the certainty index when it actually indicates certainty. In the context of this article, a type 1 error artificially inflates the measure of certainty, increasing the likelihood of finding an association between certainty and positive treatment while a type 2 error increases the chance of finding no relationship. Normally, social science convention places a higher value on avoiding type 1 errors in this context, but we defer to the reviewers’ requests to use the 2007 dictionary. Our primary hypothesis is supported by both the 2001 and 2007 dictionaries.

are, in fact, larger upon closer inspection. For example, a document with 5,864 words (the mean opinion length in our dataset) with 1 percent “certain” words will have about 59 “certain” words, which roughly equals 3.5 “certain” words per page in the U.S. Reports (this assumes a 17-page opinion with an average of 350 words per page). In short, while 3.5 words per page do not seem overwhelming, it is the repetitive effect over the course of an opinion compared to an opinion with far fewer “certain” words.¹⁵

To better illustrate how our measure relates to a Supreme Court opinion, we provide an example. *Nixon v. Administrator of General Services*, 433 U.S. 425 (1977), the legal dispute over former President Nixon’s White House tapes, has a certainty score of 1.44, which is slightly above the sample mean. In the majority opinion’s discussion of separation of powers and the “abundant” statutory precedent for mandatory disclosure of documents that the Executive branch possesses, consider Brennan’s use of the word “never.” “Such regulation of material generated in the Executive Branch has *never* been considered invalid as an invasion of its autonomy” (446), where “never” is one certainty word that the LIWC program captures. Further, consider this sentence, “As the careful research by the District Court *clearly* demonstrates, there has *never* been an expectation that the confidences of the Executive Office are absolute and unyielding” (450, emphasis added). While these two sentences represent only a small sample of what the LIWC program captures, its significance becomes more noteworthy when one considers alternative ways to construct the sentence. For example, Brennan could have simply wrote that “. . . there is no expectation that the confidences of the Executive Office are absolute and unyielding” and it would have carried the same substantive meaning, but it would have lacked the force that the added certainty brings.¹⁶

¹⁵ To alleviate concern that our search terms are capturing quotations made from federal statutes, we checked the 12 most “certain” opinions, which is 11 percent of our sample and a place where our measure might expect to register these “false positives.” We found only a trivial number of quotations of federal statutes that contained the search terms, where Court opinions tend to quote from are prior opinions, especially their own prior opinions. Importantly, we assume they are selecting these quotes *intentionally* to have a desired effect (i.e., that they are not random). Hence, when an opinion writer selects an authoritative quotation from prior case law (one that contains a search term), we believe it a reasonably safe assumption that they are intentionally picking that to buttress the authority of their own opinion.

¹⁶ To further explore the underlying construct of certainty, perhaps another alternative would be to use LIWC’s dictionary for “tentativeness” as a proxy for uncertainty. However, we believe that certainty and tentativeness are separate constructs, where being low on certainty scale does not imply being tentative. This is supported by the fact that certainty and tentativeness are only weakly correlated ($r = -0.082$, $P < 0.01$). When we insert our measure for “tentativeness” into the model below, it is not significant (though close for some conditions) and does not change any of our findings with regard to certainty.

Control Variables

Previous research shows that a number of other factors influence treatment of Supreme Court precedent by the lower courts. The first factor is *age of precedent*, measured in years. There are two views of how the age of a precedent might influence treatment by lower courts, suggesting competing hypotheses. The first view suggests that older decisions have become fundamental to the Court and lower courts would be more likely to positively treat 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 (see Brenner & Spaeth 1995).

Research also suggests competing directional hypotheses for the *complexity* of a case. Wasby (1970) views complex decisions as confusing to the lower courts and thus expects them to limit positive treatment. Alternatively, Johnson (1987) found that complex decisions were followed more often and Benesh and Reddick (2002) viewed complex decisions as fostering higher levels of positive treatment since they engender a closer reading. For *complexity*, we count the number of legal provisions relied upon and the number of issues raised in the precedent (Spaeth 2006).

We also include the *ideological consistency with the Supreme Court majority opinion*. Ideology influences lower court judges (see, e.g., Hall & Brace 1992; Songer & Haire 1992), 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. We use the Judicial Common Spaces score (Epstein et al. 2007a) for each federal court of appeals judge, district court judge,¹⁷ and each Supreme Court justice, a measure of personal ideology that places them in the same policy space. We 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.

We also control for case *importance*. Although some scholars argue that important Supreme Court cases are more likely to be followed by lower courts since they are more visible (see Benesh & Reddick 2002), important cases are also more likely to be controversial, and a number of scholars (Baum 1978; Gruhl 1980;

¹⁷ Many appeals court panels include a district court judge (e.g., Collins & Martinek 2011). Thus, we calculated their scores using the same method.

Wasby 1970) have suggested that controversial Supreme Court decisions are more likely to receive negative treatment by lower courts. Thus, we use two measures to tap into the importance of a Supreme Court case.¹⁸ 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 (Epstein & Segal 2000; Epstein et al. 2007b).¹⁹ 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 (Spaeth 2006).

Next, we control for the possibility that lower courts sometimes engage in anticipatory behavior. How far away has the Supreme Court moved 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. Klein (2002) found evidence that two federal appellate judges indicated they sometimes engage in anticipatory decisionmaking. In addition, Gruhl (1981) found that federal court decisions were more likely to act in anticipatory compliance. Thus, we control for a *change in Supreme Court ideology* and we 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. We expect that, as the distance grows, the lower courts will be less likely to treat the Supreme Court case positively.

We also account for the *treatment of precedent by Supreme Court*. Hansford and Spriggs (2006) found that lower courts respond to how the 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, we use *Shepard's* to identify all subsequent Supreme Court cases that positively or negatively treated it. We then count the number of times the

¹⁸ Case importance operates on both a political and legal dimension (see Maltzman & Wahlbeck 2004). Thus, we need two measures of case importance.

¹⁹ These are cases that (1) led to a story on the front page of the *New York Times* on the day after the Court handed down the decision; (2) were the lead cases in the story; and (3) were orally argued and decided with an opinion.

Court's majority opinions interpreted the precedent in a positive or negative manner at the time the lower court treats the decision.²⁰ We take the difference between the number of prior positive and negative interpretations. 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. We 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.

We also control for how much support the opinion has garnered. Thus, we include a variable, which is equal to 1, if the vote in the case is *unanimous*, or 0 otherwise.²¹ To control for Supreme Court cases that have been *overruled*, we include a dummy variable, which is equal to 1 if the case has been overruled by the Supreme Court, or 0 otherwise. We use *Shepard's* to identify cases that have been overruled and expect that these cases are less likely to receive positive treatment by the lower court.

Another potential factor is *opinion clarity*. Principal-agent theory suggests that agents have a more difficult time evading a principal's commands when those commands are clear (Brent 2003). In other words, a clearly written opinion leaves less discretion for the lower court. Spriggs (1996) found that opinion clarity mattered for agency compliance. In addition, Staton and Vanberg (2008) identify that when judges value policy outcomes (rather than managing institutional prestige), judges will value clarity over vagueness (as part of the tradeoff). Additionally, if an opinion is written very clearly, it may be more persuasive. While there are many possible ways to measure an opinion's clarity, for one proxy we use the average number of words per sentence. This is a variant of the commonly used readability measures, which capture surface characteristics of a text (such as the average sentence length) to use as a proxy for the difficulty of reading the text. We expect that as

²⁰ We exclude "Overruled" from this count because of the following variable. We also exclude from this count any memorandum opinion that interpreted a precedent (see Hansford & Spriggs 2006). If *Shepard's* codes a particular treatment as negatively interpreting a precedent in more than one way, we only count this as one negative interpretation of the Supreme Court precedent. If *Shepard's* codes a treatment both positively and negatively, we include both of these treatments in the counts of positive and negative treatments (see Hansford & Spriggs 2006).

²¹ As a robustness check, we also controlled for the size of the majority coalition by adding a variable for the size of the majority coalition and the results were substantively similar. Alternatively, we inserted a dummy variable for each size of the majority coalition (e.g., five members, six members, seven members, and eight members, where a unanimous coalition was the baseline) and the results were again substantively similar.

opinion clarity increases, lower courts should treat precedents more positively.

While the readability measure captures one dimension of legal clarity, we also control for a second type of opinion clarity—the *attention to detail*.²² In this vein, Randazzo, Waterman, and Fine (2006) use a measure of statutory constraint, borrowed from Huber, Shipan, and Pfahler (2001) and Huber and Shipan (2002), that suggests the more detail provided in a statute will constrain other actors who are responsible for implementing the policy. It is simply the log of the total number of words in the opinion.²³ We expect clear precedents to be treated more positively. Finally, we also include in the model all of the dummy variables for each circuit, excepting the First Circuit which was used as the baseline, so that each dummy can be interpreted as the impact of a given circuit relative to the First Circuit.²⁴

Results

Does more authoritative language affect the treatment of Supreme Court precedent by the Circuit Courts of Appeal? Table 1 suggests that opinions that have a higher level of certainty are more likely to be treated positively by the lower courts.

²² We do not specifically control for clarity of legal rules. Thus, we recognize that there are other types of clarity that we are not capturing. However, we do believe that the clarity of legal rules would be correlated with at least one of our two measures of clarity. As we mentioned above, we also believe that certainty and clarity are separate constructs, and that clarity has different dimensions. To verify this, the two measures of opinion clarity appear to be tapping a different construct than certainty. Specifically, they are weakly correlated with certainty, and the alpha scale reliability coefficient for the two clarity measures and the certainty measure is low (less than .08). Furthermore, the correlation between the two measures of clarity is -0.01 ($P = .56$). Additionally, we examined the correlation between certainty and our two measures of clarity and they are weakly correlated (not stronger than .24). Thus, because clarity of legal rules is a separate theoretical construct from certainty, and because of the weak empirical correlations between certainty and our other two measures of clarity, we believe clarity of legal rules would be only weakly correlated with certainty. Given this, we do not feel that leaving the clarity of legal rules unmeasured would change the effect of certainty on how the court of appeals treats the Supreme Court precedent.

²³ While we use two measures of opinion clarity, we recognize that our two measures may not capture other forms of clarity (besides clarity of legal rule). Other possible forms of clarity are: pronoun reference resolution, topic maintenance, explicit marking of organization, including topic shifts, and explicit connector words (e.g., because, next, etc.).

²⁴ We also ran two additional robustness checks: a multinomial logit regression (MNL) with fixed effects for the majority opinion writer and another MNL with fixed effects for circuit and opinion writer. Those results are almost identical to the results presented here.

Table 1. Multinomial Logit Model of the Impact of “Certainty” on Lower Court Compliance

	2007 LIWC Dictionary	
	Comparison: Negative versus Positive Treatment	Comparison: Neutral versus Positive Treatment
Degree of certainty	-0.567*** (0.168)	0.002 (0.197)
Opinion clarity: average sentence length	-0.032 (0.022)	-0.043 (0.032)
Attention to detail	-0.383*** (0.109)	-0.737*** (0.131)
Age of precedent	-0.031*** (0.007)	-0.096*** (0.011)
Complexity	0.084 (0.060)	0.191* (0.075)
Ideological consistency with Supreme Court majority opinion	0.430* (0.248)	0.211 (0.304)
Legal importance	0.565** (0.217)	-0.208 (0.310)
Political importance	-0.040 (0.151)	0.166 (0.205)
Change in Supreme Court ideology	0.956 (0.610)	2.628*** (0.759)
Unanimous opinion	-0.259* (0.118)	-0.113 (.139)
Overruled	0.995 (0.648)	1.014 (1.168)
Treatment of precedent by Supreme Court	-0.340*** (0.061)	-0.120 (0.091)
Constant	2.99** (0.985)	4.976*** (1.292)

N = 2,772; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$ (one-tailed tests where directionality hypothesized).

Note: Fixed effects for each circuit are not reported.

Specifically, even after controlling for alternative explanations, the coefficient for degree of certainty is statistically significant. Thus, the fact that the decision is more authoritative appears to affect treatment by the lower courts.²⁵ As the level of certainty

²⁵ To further explore the findings on the relationship between certainty and lower court treatment, we examined the bivariate relationship between them and the results are the same for both the 2007 and 2001 dictionaries. Certainty continues to exert a strong, significant effect on lower court treatment even when it is the only variable in the model. This test was to help ensure that the observed effect in the results was not being driven by some other confounding or collinear variable that was also in the model. This also speaks partly to the question of whether sophisticated judges (who know other judges are doing this) are influenced by opinion language that expresses uncertainty. As we address this issue partly in the concluding section, we believe this strategy can be both conscious and unconscious. We address the unconscious part in the conclusion. In short, with respect to using certainty as a conscious strategy, we think that varying the certainty of language is partly responsible for success in persuasiveness. It is odd, we think, to be skeptical of Supreme Court justices crafting opinions by adding more certainty to enhance the likelihood of being more persuasive considering that all lawyers are extensively trained to write and speak in an authoritative manner. To think that the entire legal profession (lawyers, judges, etc.) devotes this much time and resources to the way legal briefs read, and how they speak, and

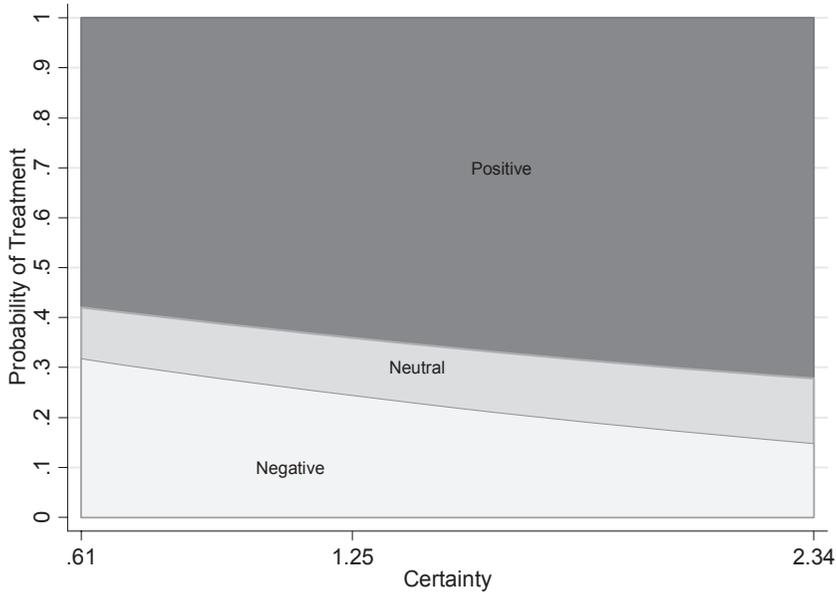
increases, circuit courts are more likely to treat the majority opinion positively and less likely to treat that opinion negatively. However, the coefficient for neutral treatment is not statistically significant, suggesting that the degree of certainty does not influence whether the lower court is less likely to treat the opinion neutrally. Specifically, as the degree of certainty increases by one standard deviation above the mean, the probability of positive treatment goes from 0.634 (the baseline) to 0.662, an increase of 0.028. The probability of negative treatment drops to 0.218 from 0.251, a decrease of 0.033. When the certainty score is at its highest compared to its lowest, the probability of positive treatment increases from 0.571 to 0.716, an increase of 0.145. This finding suggests that the Supreme Court can increase compliance by using more certain authoritative language in its opinions.

To better illustrate the magnitude of our findings, Figure 1 displays the predicted probabilities of the three types of treatment based on the level of certainty, holding the other variables at their mean or modal values. Each shaded region corresponds to a different treatment: positive, neutral, and negative. Figure 1 supports our hypothesis, as it illustrates that as certainty increases, the probability of a positive treatment increases while the probability of a negative treatment decreases, with the probability of a neutral treatment staying the same. To further highlight the substantive effect a change in certainty might have, consider how a modest change in certainty will increase the number of positive treatments of an opinion. For example, with a one standard deviation increase in certainty (which is approximately 1 more certainty word per page of a 17-page opinion), our model would predict 40 more positive treatments of Supreme Court precedent. This becomes even more substantial when we consider the possibility that one Supreme Court opinion might get multiple positive treatments from several Courts of Appeals decisions.

Our model also includes a series of control variables and there are several variables related both to increased negative treatment and neutral treatment.²⁶ Although *opinion clarity* is not statistically

expect them *not* to be persuasive is somewhat baffling. We are not arguing that expressing more certainty is guaranteed to lead to a more positive treatment. Recall that we are estimating a probabilistic model, so there will be instances where expressing high amounts of certainty will not work. But that judges are, in many ways, just as likely to fall prey to many common cognitive illusions as laypeople. For just one study on this, Guthrie, Rachlinski, and Wistrich (2001) show that judges' decisionmaking was affected by five different types of cognitive illusion that we normally would expect them to be immune from. In short, judges are human. Moreover, we believe that overstating ones' case, as we argue earlier, can backfire and will also serve as a deterrent so that when the strategy is invoked, it is harder to detect.

²⁶ 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



Note: The figure represents the cumulative predicted probability of the probability of treatment, 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 degree of certainty in the Supreme Court precedent. Figure was generated with the SPost Commands (Long & Freese 2006).

Figure 1. Predicted Probabilities of Each Type of Treatment.

significant ($P = 0.072$, one tailed), *attention to detail* is statistically significant and signed in the expected direction. Specifically, more detailed precedents are treated more positively than either negatively or neutrally. As *attention to detail* increases, positive treatment goes from 0.634 to 0.693, an increase of 0.059. This suggests that opinion clarity, along with certainty, matters when it comes to treatment of Supreme Court precedent by lower courts, which is consistent with earlier research by Huber and Shipan (2002), Randazzo, Waterman, and Fine (2006), Spriggs (1996), and Staton and Vanberg (2008).

As we noted, scholars have disagreed about whether older or more recent Supreme Court cases are more likely to be treated positively by the lower courts. The results of this study show that

Circuit, and the Fifth and Seventh Circuits are more likely to treat Supreme Court cases neutrally than the First Circuit. In addition, we also estimated a model with opinion author fixed effects to account for the fact that lower court judges may be responding to the signal of the opinion author. We find nothing changes (in fact, the certainty effect increases slightly).

the age of the Supreme Court precedent has a positive impact on lower court treatment. As precedents age, lower courts are less likely to treat a Supreme Court decision negatively and neutrally. If the Supreme Court precedent is 15 years old (one standard deviation above the mean) compared with 8 years old (the mean), the probability of positive treatment goes from 0.634 to 0.708, an increase of 0.074. Thus, the results show 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, if the decision has more positive treatments than negative treatments by the Supreme Court, the lower courts are less likely to treat the case negatively. If the Supreme Court has treated its own precedent more positively than negatively, the probability of positive treatment goes up by 0.049 (0.634–0.683).

More complex cases are more likely to be treated neutrally than positive, while legally important cases are more likely to be treated negatively than positively. Additionally, as the difference in ideology between the Supreme Court case and the deciding appeals panel increases, the lower court is more likely to treat the precedent negatively versus positively. However, the political importance of the case does not appear to manifest any systematic influence on the lower courts' treatment of the precedent.

With respect to changes in Supreme Court ideology, the odds of the lower court neutrally treating the case rather than positively treating the case increase. Specifically, the probability of positive treatment decreases by 0.029 when the distance between the ideology of the Supreme Court sitting at the time the lower court treats the precedent and the ideology of the Supreme Court that handed down the precedent increases (0.634–0.605). Thus, 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. This suggests 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. Finally, if the precedent was a unanimous opinion, lower courts are more likely to positively treat the precedent than negatively treat it, with the probability of positive treatment increasing by 0.047 (0.634–0.681).

Conclusion

Past research was mixed regarding whether the authoritative-ness of a Supreme Court opinion influenced lower court compliance. However, those studies defined authoritative-ness based on

the amount of support the majority opinion had. In contrast, we examine the authoritativeness of the majority opinion based on the language the justices use in the opinion. “Opinion writing is public writing of the highest order; people are affected not only by judicial opinions but also by how they are written” (Lebovits, Curtin, & Solomon 2008: 237). Given that the judiciary’s power comes arguably from its words alone, it is important to understand how the language the Court uses in its opinions can influence how lower courts treat those decisions.²⁷

Lower courts are more likely to positively treat Supreme Court precedents when the precedent contains more certain language, suggesting that there is a connection between the content of court opinions and implementation by other actors. By using more certain language, lower court judges may be more persuaded by the opinion. Although we argue that lexical choice is an important feature of the Supreme Court’s persuasiveness, we are by no means assuming that lexical choice is the only tool that judges have to persuade. It is also possible that other nonlexical linguistic features, such as presuppositions used to provide background information on sentences that convey an author’s purported assumption that the proposition in question is already assumed true by the addressee, may also persuade lower court judges to treat a Supreme Court precedent more favorably. However, an examination of presuppositions would entail a different type of analysis that requires a close reading of a much smaller number of opinions and is beyond the scope of the current article. Importantly, we believe that both lexical choice and other nonlexical tools, such as presuppositions, sentential syntax, and discourse coherence, all make important contributions to an opinion’s ability to persuade.

Additionally, the degree of certainty used may not be completely a conscious judicial strategy. It is also entirely likely that some justices are (just as some laypeople are) more inherently gifted communicators, allowing them to write and speak “automatically” in a manner that is more convincing and certain. Some judges and lawyers undoubtedly have a “gift” or “knack” for phrasing arguments in just such a way that it makes it very difficult to disagree with them. This argument is echoed in Black’s (1989) book where he finds that speaking style matters greatly for the credibility

²⁷ As a caveat, we should note it is possible that some third variable, such as a legal regime or political environment or process, may be at work that is influencing the amount of certainty used in opinions. If this is the case, it is possible that certainty is a proxy that is capturing the influence of this third variable. Importantly, though, if it is working through certainty, it is no longer having a direct impact on how the lower courts treat precedent.

of witnesses who testify. For those where expressing certainty is partly an unconscious act, we think, the legal domain is no different than other domains. The presence (or absence) of this personality characteristic, however, does not diminish the fact that certainty can also be a conscious strategy that is used to try and enhance the persuasiveness of a message.

This raises a couple of important broader questions. Namely, what does certainty stand for? As well as, is it legally relevant and might it apply to other areas of legal decisionmaking? With respect to the first question, a rudimentary examination of the definition of certainty might suggest it stands for a firm conviction or belief that something is reliably true. That someone is willing to phrase an opinion with more certainty not only means that a particular response is desired, it also suggests that the person's reputation and keen judgment are being called to speak for the legal actor. It is another way of saying "trust me" without having to explicitly reference those terms, and its strength lies in the fact that one can use this phrasing of language to communicate with either friend or foe. It is a linguistic mechanism designed to signal that only a certain logic could have led the debate to a particular point and that it leads to only one proper conclusion. In sum, certainty stands for something that can help tip the scales in a case.

As for certainty's legal relevance, we posit that it is especially relevant to appellate court judges and hierarchical relations in the judiciary. Importantly, that is the only relationship we tested for in this article, yet we believe it also applies to other judges (e.g., lower court judges applying a higher court's ruling on the admissibility of evidence) as well as lawyers who might, when advocating for a client, phrase an important case precedent or fact in such a way to make it appear the judge has little other choice but to decide in their favor. We also think certainty is relevant for juries and their decisionmaking, as well as litigants. Consider this quote from Donald Black:

It should finally be mentioned that the success of litigants also depends on how they speak. Recent experiments show that the credibility of people in court increases if they testify in a style characteristic of high-status people. We can distinguish between "powerful" and "powerless" speech by witnesses in courtrooms . . . those testifying in the powerful mode have more credibility. To a judge or jury, they seem more competent and trustworthy . . . In various ways, then, how people speak allows the social structure of a case to insinuate itself into the courtroom when it might otherwise be unknown. (Black 1989: 18–19)

We believe it even applies to broader coverage of social movements, with how the news media cover and frame a reaction, a political

protest or social response to a Court ruling. For example, Gamson and Modigliani (1987) document the trends in which certain affirmative action frames are used over time by columnists. They find that columnists' usage of the "delicate balance" frame, which argues that the government should maintain a proper balance between remedying past discrimination and avoiding future discrimination, peaks at the time of the *Bakke* decision, something that is notable because of the "balance" that was eventually struck by the Court, striking down racial quotas but allowing the use of race as a criterion in school admissions. This suggests that if the media frames the case in such a way that it emphasizes certainty of an outcome or some ramification, then the case might have a much broader impact, possibly greatly influencing the momentum of a social movement or even change the social structure of future cases.

Furthermore, these findings raise important empirical and normative questions. From an empirical standpoint, given our findings, one might suggest that all justices need to do to increase compliance is to add language to increase the certainty of an opinion. However, as we noted above, if justices want to be regarded as credible and respectable jurists, they need to exercise their own discretion, realizing that sending the signal of high certainty "all the time" will lose its value. In other words, justices need to demonstrate some modesty and temper any inclination that demands perfect compliance.

From a normative perspective, one might wonder whether having an ability to increase compliance (by changing the certainty of the language in an opinion) is a "good" or "bad" thing for the law as well as legal change in society. Although we are not entering the normative debate, we recognize that increasing the certainty of opinion language to ensure compliance may (or may not) have negative consequences that may be intended or unintended. For example, Brewer and Burke (2002) found that a more confident witness was perceived by jurors to be more credible, as indicated by the jurors' higher likelihood of believing a crime was committed, regardless of whether the witness was consistent or inconsistent in testimony (see also Whitley & Greenberg 1986). In contrast, increased certainty can also have positive effects. For example, it has long been widely accepted that one of the Supreme Court's main purposes is to clarify the law. In other words, when multiple circuit court decisions are in conflict with each other, creating uncertainty in the law, many view it as an important function of the Court to reduce this conflict. In situations where there is lower court conflict, it can be beneficial if the Supreme Court increases its level of certainty in an opinion to better ensure compliance, thus helping to alleviate conflict in the lower courts. In sum, our larger point is to emphasize the importance of documenting and high-

lighting the presence of the empirical finding of certainty and how it influences judges on the Courts of Appeals.²⁸

Beyond this article's primary contribution to a greater understanding of the connection between the language of court opinions and treatment by lower courts, 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 (Owens & Wedeking 2012), such as the LIWC software used here (e.g., Owens & Wedeking 2011) as well as other automated methods (e.g., Corley 2008; Corley, Collins, & Calvin 2011; Laver, Benoit, & Garry 2003). For example, future research might use the LIWC software to evaluate whether more certain language used in parties' briefs leads to more favorable outcomes or whether it influences the extent to which the Supreme Court borrows from the parties' briefs. We believe that the addition of systematic research into this area will provide more insight into understanding how the law is crafted.

Appendix A

List of "Certain" Words in the 2007 LIWC Dictionary

absolute, absolutely, accurate*, all, altogether, always, apparent, assure*, blatant*, certain*, clear, clearly, commit, commitment*, commits, committ*, complete, completed, completely, completes, confidence, confident, confidently, correct*, defined, definite, definitely, definitive*, directly, distinct*, entire*, essential, ever, every, everybody*, everything*, evident*, exact*, explicit*, extremely, fact, facts, factual*, forever, frankly, fundamental, fundamentalis*, fundamentally, fundamentals, guarant*, implicit*, indeed, inevitab*, infallib*, invariab*, irrefu*, must, mustn't, must'nt, mustn't, mustve, must've, necessar*, never, obvious*, perfect*, positiv*, precis*, proof, prove*, pure*, sure*, total, totally, true, truest, truly, truth*, unambigu*, undeniab*, undoubt*, unquestion*, wholly.

²⁸It is also important to recognize that we only examine the effects of certainty on Courts of Appeals judges, or what Hall (2011) refers to as vertical issues (those issues interpreted and enforced by lower courts). While Hall (2011) shows that compliance with Court decisions is much better on vertical issues compared to lateral issues (issues interpreted by noncourt actors), compliance is still not perfect on vertical issues, in particular with unpopular vertical issues, and is even lower on what Hall (2011) identifies as "unpopular lateral issues."

Multinomial Logit Model of the Impact of “Certainty” on Lower Court Compliance

	2001 LIWC Dictionary	
	Comparison: Negative versus Positive Treatment	Comparison: Neutral versus Positive Treatment
Degree of certainty	-0.693** (0.283)	-0.739* (0.361)
Opinion clarity: average sentence length	-0.041** (.015)	-0.043* (0.019)
Attention to detail	-0.411*** (0.109)	-0.707*** (0.134)
Age of precedent	-0.032*** (0.007)	-0.095*** (0.011)
Complexity	0.061 (0.060)	0.184* (0.077)
Ideological consistency with Supreme Court majority opinion	0.370 (0.246)	0.246 (0.304)
Legal importance	0.603** (0.216)	-0.219 (0.307)
Political importance	0.090 (0.157)	0.333 (0.212)
Change in Supreme Court ideology	1.06* (0.601)	2.71*** (0.760)
Unanimous opinion	-0.285* (0.123)	-0.197 (0.140)
Overruled	1.364* (0.636)	0.961 (1.16)
Treatment of precedent by Supreme Court	-0.309*** (0.059)	-0.100 (0.092)
Constant	3.40*** (0.963)	5.46*** (1.22)

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