Editor in Chief

Opinion Authorship and Clerk Influence on the Supreme Court

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Abstract

Despite increasing use of the content of legal opinions to make inferences on the behavior of the judiciary, little attention is paid to the process that generates these documents. This article contributes to the ongoing discussion on the role and function of clerks by addressing conceptual, methodological, and empirical concerns that have hampered investigating the content of Supreme Court opinions. Conceptualizing influence in terms of the language adopted into the opinion, I assess the extent that Supreme Court opinions reflect the language of the clerks, and examine the responsiveness of this influence to the policy incentives of the justices. Overall, the results indicate that concerns over clerk influence are generally overstated and that the opinions of the Supreme Court reflect and respond to the policy incentives of the justices.

As the the role of legal doctrine in judicial decision making has gained prominence in the academic literature on courts, scholars of judicial politics have increasingly focused on the content of opinions to provide insights into existing debates on judicial behavior (Corley 2008; Bailey and Maltzman 2008; Landa and Lax 2009; Lupu and Fowler 2013). In studying the Court's outputs, these scholars have relied on the holding of the case - the justification grounded in legal language - to evaluate its 'policy content' (McGuire et al 2009).

Yet the process that generates these documents is given scant attention within this literature. Most insider accounts of the court emphasize the influence of law clerks in drafting opinions (Kozinski, 2005; Rehnquist, 1957; Posner, 1999; O'Brien, 2002; Sanders, 1990; Ward and Weiden, 2006). These insider perspectives suggest that the judges pay little attention to the precise wording of their opinions. Yet to the extent that opinions are authored by clerks, their language is reflective of clerks' often-distinctive incentives and may not be policy-relevant information. Commonly used sources to estimate legal policy, like citations to precedent, are often alleged to simply express the reliance of clerks upon attribution, rather than reflecting the holding of the case. If law clerks are the primary authors of Supreme Court opinions, using these opinions to support arguments about judicial policy is tentative at best.

In order to assess the scope of clerk influence on the opinion drafting process, I search for textual evidence that the published opinions of the Supreme Court reflect either the style or the language of the clerks. While studies of clerk influence have generally relied upon interviews and surveys of court personnel, these individuals have a professional obligation for confidentiality and stated motivations to misrepresent their work. Finding that the style of the document reflects the justices, and not the clerks, I then examine whether clerks are successful at getting particular language adopted into the opinion. Influence in authorship is expressed via the adoption of language into the opinion. When an individual is successful at getting language adopted into the opinion, they have altered the policy of the opinion,

and thus influenced the law. Since influence must be assessed relative to other sources, these results are compared to two other institutions postulated to shape the reasoning of the justices: the opinions of the lower court and the briefs of the parties to the case.

The overall findings reshape much of the conventional wisdom surrounding clerks on the Supreme Court. While clerks contribute some language to the opinions, their influence is small relative to other sources. While the use of clerks varies between chambers, anecdotal accounts of clerk influence overstate these differences. The final opinions are reflective of the style of the justices, not the clerks. Variation in the use of clerks is better explained by the policy environment of the case, rather than the personality of the justices. These findings thus support the contention that opinions are the product of the justices.

1 The Contested Clerk

The dominant framework used by judicial behavior scholars evaluating the role of clerks on the Supreme Court generally accepts that the law clerks author the first draft of most court opinions (Kozinski, 2005; Rehnquist, 1957; Posner, 1999; O'Brien, 2002; Sanders, 1990; Ward and Weiden, 2006). The controversy over clerk influence centers upon the degree of involvement of the justice in the authorship process that edits the first draft into a final opinion.

While insider accounts of the court tend to reach inconsistent results regarding the overall influence of the clerks, these studies yield considerable insight into the motivations of the clerks and the justices, as well as the general institutional patterns of their interaction. Several accounts attribute distinctive political preferences to the clerks. As a law clerk to Justice Powell, Rehnquist observed that liberal proclivities among clerks tended to influence

¹ While this is accepted post-1960, earlier accounts of the role of clerks vary by period and chamber. However, most commentators agree that overall clerk influence has increased over time (Wahlbeck and Sigelman, 2002). As noted below, due to data limitations arising from the need to infer clerk authorship patterns, this study is unable to assess clerk influence during these earlier periods.

their treatment of cases (Rehnquist, 1957). As a law clerk for Justice Blackmun, Lazarus similarly alleged that conservative law clerks pursued ideological objectives, particularly on death penalty cases (Lazarus, 1998). The institutional power of the clerks is derived from the "enormous power of the first draft, and, specifically, in the selection of words, structure, and materials, that clerks may exercise their greatest influence" (Lazarus, 1998, p 270). The justices have acknowledged the potential scope of clerk influence, leading Justice Jackson to joke that "the Senate no longer need bother about confirmation of Justices but ought to confirm the appointment of law clerks" (Wilkonson, 1974).

While these accounts uniformly describe the role of the clerk as the draft author, they differ over the effectiveness of justice edits. As a clerk to Justice Powell, Wilkinson alleged that the justices closely supervised the clerks, primarily via extensive editing of the clerk draft (Wilkonson, 1974). Rehnquist similarly noted that Powell's extensive revision of clerk drafts was sufficient to ensure that opinions "were unquestionably the Justice's own, both in form and substance" (Rehnquist, 1957). However, Lazarus alleged that editing by justices was insufficient - they simply reviewed the finished products.² Other sources allege that clerks throughout the judiciary have "no adult supervision", instead acting as "invisible judges," resulting in the 'literary style' of published opinions from some chambers changing annually (Rubin, 1976). Interviews and surveys with clerks reinforce the assessment that the justices generally edit the draft opinions of the clerks. On the Rehnquist court, only Stevens reports writing the first draft of most opinions (Peppers, 2006). Surveys of clerks indicate that justices act as editors, though, as discussed below, there are allegations of varying degrees of review between the justices (Woodward and Armstrong, 1979). A voluminous literature exists assessing the academic merit and historical accuracy of insider accounts of the court (Lewis, 1980; Woodward and Armstrong, 1980; Navasky, 1980). However, even authors critical of the veracity of the material in these works accept with little hesitation that

² "While everything they write passes through the filter of their Justice's scrutiny, this scrutiny is directed at an essentially complete product and often amounts to little more than a surface polish" (Lazarus, 1998).

the clerks have exceptional influence over the court. For example, while generally critical of clerks as a reliable source, Kurland (1979) accepts that:

The law clerks may be serving the function of a legislative reference bureau in choosing the words to give meaning to the legislature's will, or in manufacturing the equivalent of legislative history in an effort to sneak in a different meaning for statutes from that which secured the approval of the lawmakers. (Kurland, 1979, p 198)

Given the importance of clerks in authoring the first draft and the potential for clerks to insert their own preferences into opinions, justices have incentives to select ideologically similar and exceptionally gifted clerks. The justices tend to select clerks from former members of law review at elite law schools (Peppers, 2006). Empirical evidence suggests that justices tend to have ideologically similar clerks, often drawing clerks from like minded judges on the lower courts (Ditslear and Baum, 2001). However, while there is a strong correlation between the self-reported ideology of the clerks and the ideology of the justices, on particular cases the clerks and the justices may still disagree, as in the disagreement between Blackmun and his clerks over Planned Parenthood v Casey (Ward and Weiden, 2006).

These perceptions are supported by quantitative approaches. In surveys of the clerks, one in four clerks report not only disagreement, but being able to change the justice's mind at least some of the time, often on the substantive content of the opinion (Ward and Weiden, 2006). Moreover, clerks report that during the Rehnquist court, individual justices hired an increasingly ideologically diverse set of clerks. Similarly, Peppers and Zorn find that, controlling for the ideology of the justice, the ideological propensities of clerks influence the justice's votes on the merits (Peppers and Zorn, 2008). These surveys help to contextualize clerk influence relative to other factors. On average, the clerks tend to assess their own influence as less extensive than the briefs of parties or lower court opinions, though their self-assessment of influence has tended to increase over time (Ward and Weiden, 2006).

Qualitative analyses of legal texts have tended to reinforce the perception of clerk influence, though these textually-driven approaches have generally been limited to small samples of the work of clerks. After completing an exhaustive review of Blackmun's personal papers in Roe v Wade, Garrow concluded that "he [Blackmun] gave his law clerks control over his thinking and writing when he was on the Supreme Court" (Garrow, 2005). The scope of clerk influence is alleged to be substantial. "Well over half of the text the [Supreme] Court now produces was generated by law clerks" (Donahue, 1995). Existing quantitative approaches offer tentative support for these conclusions. Wahlbeck found that the style of clerks is discernible in the first draft of opinions circulated between justices. Critically, however, the study was concerned solely with whether it was possible to identify the drafting clerk. The extent of the influence of the justices was left unexamined (Wahlbeck and Sigelman, 2002).

These approaches suffer from the drawbacks inherent to reliance upon interviews and surveys of clerks for information on the internal processes of the court. Due to the clerks' professional obligation for confidentiality, stated reasons to misrepresent, and limited knowledge of court procedure, the information obtained from clerks is of questionable accuracy. Clerks have a professional obligation to keep court proceedings confidential. "One of the oldest and most basic traditions of the office of law clerk... [is] the tradition that gossip about or any discussion of the Court's work with outsiders is absolutely not to be tolerated" (Peppers, 2006, p 106). Moreover, the ability to rely upon clerks and other 'insider' sources has diminished after the publication of several high-profile accounts of the court that relied on clerks as primary sources. After the publication of The Brethren, the justices attempted to increase the secrecy of court proceedings. In particular, former clerks have refused to answer even the most innocuous questions - "does Justice O'Connor still conduct an aerobics class" and "do the law clerks still have lunch during the term with justices from different chambers" (Peppers, 2006; Woodward and Armstrong, 1979). This has caused even the most sensational allegations about several justices to go unanswered by the clerks (Peppers,

2006).

The clerks also have stated reasons to misrepresent the internal dynamics of the court. Clerks often remain loyal to the justice they clerked for and thus seek to defend the reputation of 'their' justice (Wilkonson, 1974). They also have professional careers of their own, often seeking elective or political office, and therefore may have a vested interest in a particular interpretation of the dynamics of the court (Peppers, 2006).

This study goes beyond previous work by focusing upon the actions of clerks while on the court, rather than their subsequent descriptions of these acts. While clerks have incentives to misrepresent the internal bargaining processes of the court, the documents authored by legal actors on the court leave discernible traces of this process. By focusing upon the policy-relevant authorship behavior of the justices and the clerks, this study effectively circumvents the limitations imposed by confidentiality and incentives to misrepresent. This, however, requires a renewed focus on the nature of legal opinions.

2 Opinionated Language

While early research on the Supreme Court focused on patterns of judicial voting over the judgement of the case, scholarship on the court has increasingly turned to evaluating the influence of the judicial process on the policy embodied in the case - its holding. This holding is the precedent set in the case, expressing a rationale in support of the judgment meant to govern similarly situated parties and determining the bounds of the application of precedent (Tiller and Cross, 2006; Clark and Lauderdale, 2009).

Opinion authorship on the Supreme Court is shaped by two features of the holding. The first concerns the role of the holding. The holding is the primary policy instrument of the court, setting judicial policy by binding the disposition of cases on lower courts (Maltzman and Wahlbeck, 2000; Rohde and Spaeth, 1976; Epstein, 2007). Since the holding is meaningful only insofar as it is applied by the lower courts, the policy benefit from the opinion

is contingent upon lower courts' ability to discern the holding, and therefore depends on the quality of the opinion, expressed as the precision of its language. Vague and ambiguous opinions can result in misapplication of the holding among the lower courts. Moreover, vague opinions generate opportunities for lower court noncompliance, either by distinguishing the case or through misperception of the holding (Fowler and Jeon 2008).³ The more precise the language of the opinion, the more likely lower courts are to correctly apply the holding.

The second feature of the holding that shapes opinion authorship on the Supreme Court is the costly nature of the drafting and editing process. As noted above, clerks are generally recognized as the authors of the initial draft, engaging in costly research of the case history and appropriately treating relevant precedent, mapping both into the holding of the opinion. However, clerks may be unsure which facts and reasons are essential to the outcome of the case, leaving ambiguity in the case that generates the potential for lower courts to manipulate the holding (Posner, 1999).

Moreover, legal language is differentiated from other forms of communication in that even minor differences in the language of the opinion could alter the outcome of future litigants.⁴ Since legal language rewards exceptional attention to detail, drafting a high quality (precise) opinion requires considerable expertise by opinion author (Bonneau et al., 2007). As a result, clerks lack the required experience to craft sound legal opinions on their own. As noted by the The Federal Judicial Center's Judicial Writing Manual

The judge must always remember, however, that the law clerk usually is fresh out of law school, with little practical experience. Even a distinguished academic record does not qualify a law clerk to practice the craft of judging, to draw the

³ While the justices possess the ability to punish lower court noncompliance, approximately 30% of appeals court opinions are estimated to be non-compliant (Westerland, 2009). Noncompliance is particularly costly for the opinion author since it is most likely on ideologically dissimilar courts. Throughout this paper, I assume that a vague opinion results in the lower courts reverting to the status quo (here modeled as their own preferences). The actual application of a vague opinion could be worse, potentially revitalizing precedent contrary to the policy goals of the justices.

⁴ For example, see Flores-Figueroa v. US., no 08-108, on the importance of adverbial modification of verbs versus verb phrases.

fine line between reversible and harmless error, to make the sometimes delicate assessment of the effect of precedent, and to recognize subtle distinctions in the applicable law... Law clerks' fact statements, analysis, and conclusions may require major revisions. Judges should not simply be editors no matter how capable the clerk, the opinion must always be the judge's work.

Since justices have more experience mastering opinion writing and observing the application of opinions in the lower courts, they have an incentive to edit the opinions produced by the clerks in order to generate a higher quality holding. The more effort the justice invests, the more of the opinion is rewritten, increasing the likelihood that the holding is correctly applied by lower courts. As with the creation of the clerk draft, editing is a costly process for the justice. It is not uncommon for Supreme Court opinions to undergo twenty drafts before they are distributed to the other justices (Rehnquist et al., 1999).

The costly nature of precision generates a particular set of incentives for the justices and the clerks. Since the policy relevance of the holding is shaped by its precision, both the justice and the clerk prefer a higher quality opinion. Since precision is a product of the drafting and editing process, but both of these activities are costly, both the clerk and the justice must balance the policy importance of the case against the opportunity cost of authorship. Therefore, if justices are actively involved in editing opinions due to the necessity of effectively communicating judicial policy, variation in opinion authorship across opinions is a strategic response by the justice to the policy importance of the case. The decision to incorporate material from another source weighs the potential benefit of a 'better' opinion against the cost of the justice for investing time in authorship (or, equivalently, extensive editing of a clerk draft). As a result, justices are less likely to invest time in authoring a high-quality opinion on cases with fewer policy benefits (on lower salience cases), instead delegating more responsibility to the clerks.

Personal characteristics also shape the use of clerks and alternative sources of legal lan-

guage. Justice Stevens is noted for the limited discretion given to his clerks, noting "I'm the one hired to do the job" (Peppers, 2006, p 19). In some chambers, extensive oversight purportedly extends to the minutiae of language. Justice Ginsburg provides clerks with a manual detailing rules about the language to be used in the opinion, even warning to not use 'since' in place of 'because' (Peppers, 2006, p 284). Powell is noted to have preferences over the format of the opinion, extending to a "dislike for split infinitives; the sparing use of commas, personal pronouns, adjectives, and adverbs, and a preference for simple sentence structure" (Peppers, 2006, p 188).

Other justices are portrayed as paying little attention to the content of their opinions and activities of their clerks. Justice White was reportedly frustrated when clerks required detailed directions.⁵ Justice Thurgood Marshall, in particular, has been the focus of these commentaries. Allegations that Marshall simply watched television while the clerks authored the opinions are repeated in a variety of sources (Eastland, 1993). Multiple anecdotes portray Marshall as having little knowledge of the content of his opinions, spending "maybe fifteen minutes" on a dissent⁶ and disavowing passages in his majority in Stanley v Georgia, instead attributing them to a clerk.⁷ Unfortunately, these allegations are difficult to substantiate via traditional interview or survey methods, since former Marshall clerks have "built a formidable wall of silence around the late justice" to protect his reputation (Woodward, ibid).

⁵ White once noted, in frustration: "[i]f I had wanted someone to write down my thoughts, I would have hired a scrivener" (Peppers, 2006, p 164).

⁶ Afterwards, when questioned about the reasoning of the dissent in San Antonio v Rodriguez by Justice Powell, Marshall reportedly responded "Did I say that?" (Woodward and Armstrong, 1979, p 258)

⁷ "That's not my opinion, that's the opinion of [a clerk from the prior term]" (Woodward and Armstrong, 1979, p 198).

3 On Influence

The preceding discussion of legal language and the role of clerks has indicated two measures to assess the influence of clerks on opinions of the court.⁸ The first highlights the potential for clerk influence to be present throughout the document. While clerks author the initial draft of the opinions, their influence over policy exists only to the extent that the final published opinion parallels the reasoning of the clerks. One way to assess this form of influence is to examine the extent that final opinions parallel the style and form of the initial approach of clerks to the case. If the 'voice of the clerk' survives the editing process, this is likely evidence of significant clerk influence. However, if justices play an active role in editing the case, the style and language of the opinion should be reflective of justice, reflected in the overall deviation of the case from the initial clerk assessment.

The second way to examine the influence of the clerks is to focus on a necessary precondition for it, the adoption of particular language (and thereby reasoning) from a source document. When the opinion uses identical language to a source document, the authors of the source material have altered the content of the opinion, and therefore influenced the law.⁹ Therefore, if clerks have influence over the opinion, they must be able to incorporate language from their initial approach to the case into the final opinion.

Both of these approaches to influence are employed here. Since the first approach posits that clerk influence is pervasive throughout the draft, shaping even the literary style of the opinion, the degree that opinions are reflective of the overall writing patterns of the clerks will be assessed via authorship attribution. The second approach will be evaluated by using plagiarism detection to examine the percentage of the opinion that is lifted directly from the

⁸ The measures advanced here are not intended to exclude or dismiss other mechanisms of clerks shaping the decisions of the court. Clerks are of undoubted importance in the selection of cases, and their conversations with the justices may help to shape the thinking on the court. This conceptualization of influence is meant to address the most egregious form of influence - shaping the opinion - a kind of influence that limits the ability of scholars to examine opinions as policy documents that shape judicial outcomes (Peppers and Zorn, 2008).

⁹ This also follows the definition of written influence adopted in American law, where incorporation of legal language from alternative sources is a form of influence (see In re Fuchsberg).

known work of the clerks.

4 Attributing Justice

Authorship attribution is a method of assigning authorship to a set of documents by comparing them to another set of documents whose authors are known. The technique assumes that writers vary in their style, and that these styles are detectable via the (generally statistical) analysis of text.¹⁰ This assumption has been borne out empirically, and there have been a number of well-known successful applications of authorship attribution, ranging from studies of the authors of the Federalist Papers (Holmes and Forsyth, 1995; Mosteller and Wallace, 1964), Shakespeare's plays,¹¹ the Unabomber manifestos (Juola, 2006), and as evidence of authorship in legal proceedings. It is generally applicable in circumstances where the set of potential authors is small relative to the set of documents, and there is an additional corpus of documents whose authors are known.¹²

In this study, the set of texts to be attributed constitute the approximately three thousand opinions issued in the cases of Supreme Court from 1986-1993 (US Reports volumes 475-510).¹³ Since they are too short to accurately recover the semantic measures of interest discussed below, the 539 opinions under 500 words were excluded. Per curium opinions were excluded, since the set of candidate authors is too large relative to the number of per curium opinions available.

¹⁰ For a general review of authorship attribution, see Juola (2006).

¹¹ See Friedman (1957) for an exhaustive review of the literature on the attribution of Shakespeare's works.

¹² However, innovations in authorship attribution methods have made differentiating between larger sets of authors possible (see Cartright and Bendersky (2009)). In this study, given the small set of potential authors for a given case - generally five - there is no need to address the scalability of these methods here.

Data availability defined this date range. As mentioned below, the writing source used for the clerks - the certiorari pool memos - was taken from the Blackmun Papers. This source covers only the years 1986-1993. While the personal papers of other justices include certiorari memos, the process of digitizing each collection is intensive and costly. The Blackmun papers were chosen because digital photos exist of the entire archive (though additional work was required for this study, see note below). No other collection is even partially digitized, a necessary prerequisite for the techniques used here. For the cases, all opinions exist digitally. These volumes are obtainable online at http://public.resource.org.

To infer the style of the clerks, I collected the certiorari pool memos from 1986-1993. The certiorari pool memos are summaries of and recommendations on each of the 6,000 to 8,000 petitions received by the court, prepared by the clerks throughout the summer and into the fall on a given term (Swann, 1992).¹⁴ Each petition is assigned to a single clerk. This clerk is responsible for preparing the memo and making a recommendation on the case. These recommendations can carry considerable weight, particularly a clerk's motion to deny certiorari.¹⁵ The memos are circulated throughout the court. In the time period under study, eight justices relied on the memos, dividing the work between their clerks. Only Justice Stevens did not, instead relying exclusively upon his own clerks (Mizer, 2007; Ward and Weiden, 2006).

Two sources were used to infer the style of the justices. The first consists of the published written work of the justices, beyond opinion-writing. These are predominantly written comments, articles, and books. ¹⁶ Spoken materials were excluded. For each justice, forty writing samples were collected (just over twice the average number of opinions authored by a justice each term). Where necessary, these writing samples were truncated to approximate the length of the average opinion. ¹⁷ The second covers the opinions of the preceding term. Since most clerks serve for only one term, these opinions should have no traces of the influence of

¹⁴ The practice of pooling clerks to divide up filings and circulate the memos between chambers began in 1972, at the suggestion of Justice Powell.(O'Brien, 2002, p 173).

¹⁵ As noted by others, the use of clerks to screen petitions may explain the apparent biases toward more objective, observable reasons to review (Brenner, 1997; Ward and Weiden, 2006; Caldeira and Wright, 1988; Stras, 2007).

¹⁶ There is no indication in any insider accounts of the court that the clerks 'ghostwrite' these documents. To the extent that these documents are 'noisy' approximations of the writing habits of the justices when authoring opinions, it should tend to bias the results in favor of finding clerk influence.

¹⁷ The average opinion longer than 500 words was approximately 4000 words. Thus, in the case of books, rather than incorporate the entire piece, single chapters were excerpted for analysis.

the clerks in the current term. 18

For all sets of text, each document was converted into plain text format. 19

4.1 Description of Data

For each text, I recalculated the set of semantic measures applied in Wahlbeck's previous approach to clerk authorship (Wahlbeck, 2002).

- Average sentence length
- Variation in sentence length, the standard deviation of words per sentence (Holmes, 1994).
- Average word length, the mean number of characters per word.
- Variation in word length, the standard deviation of characters per word.
- Type-token ratio, the number of different words (types) as a percentage of the total words (tokens). For example, the sentence "I know it when I see it" has 5 types and 7 tokens.²⁰
- hapax legomena, the number of words used exactly once

¹⁸ To the extent that the previous term's opinions were authored by the clerks, this would tend to bias the results toward finding clerk influence - against the direction of the findings - since the justice would no longer be represented by a consistent writing style. For more details on the direction of this bias, see appendix one. In general, this required dropping the first term for justices appointed to the court during the period studied (Thomas, Souter, Kennedy). The one exception to this rule was Justice Ginsburg. Since she was appointed to the court in 1993 - the final year of the study - no information on the work of the previous term was available for her. Instead, for Justice Ginsburg only, the 'opinions of the previous term' refers to the opinions of the subsequent 1994 term.

Since this process was particularly involved for the Blackmun memos, a note on the procedures used is appropriate. The original memos are part of the Justice Harry A Blackmun Papers in the Library of Congress. Photos of these documents are hosted online at the Digital Archive of the Papers of Harry A. Blackmun. The approximately 43,000 documents, covering over 500,000 pages, were translated into text using Omnipage 16 (details on the OCR process available upon request). The accuracy of these scans was calibrated via hand-recoding of random samples of the data. Observed rates of accuracy were above 99%. No memos were dropped due to data quality issues, though some pages of memos were excluded due to photo quality issues.

²⁰ Justice Potter Stewart, Jacobellis v Ohio 378 U.S. 184 (1964).

- hapax dislegomena, the number of words used exactly twice
- no/T10. The number of uses of the word 'no' divided by the number of uses of T10 words. T10 words are the 10 function words of Wells and Taylor but, by, for, no, not, so, that, the, to, with whose distribution tends to vary by author (Wells and Taylor, 1987).
- so/T10. As in 8, above.
- with/T10. As in 8 and 9, above.
- Yule's characteristic $K = 100D(1 \frac{1}{N})$, where D is Simpson's diversity index, a measure of the probability that two tokens belong to the same type, it is given by $D = \frac{\sum_{i=1}^{S} n_i(n_i-1)}{N*(N-1)}$, where S is the number of types, N is the number of tokens, and n_i is the percentage of tokens of type n. For more, see Yule, 1939.
- Entropy, given as $\sum_{i} -p_{i} \log(p_{i})$, where p_{i} is the number of occurrences of word i divided by the total number of words.

Wahlbeck also includes the average length of footnotes, since this serves as an effective means to distinguish between the justices. However, footnotes are relatively absent from the certiorari pool memos. This is likely a reflection of the different purposes of these documents, rather than variation in author style. Therefore, their inclusion would likely bias the results toward the influence of the justices and so this measure was not included in this study.

4.2 Authorship Attribution Methods

A variety of techniques exist for authorship attribution.²¹ This study focuses on two methods: support vector machines and k-neighbors classification. The first, support vector machines (SVM) was chosen for its demonstrated ability to outperform a variety of other methods

²¹ For a brief overview of several methods see Juola (2006).

for authorship attribution (Juola and Sofko, 2005; Koppel and Schler, 2004).²² Since the classification problem involves distinguishing between up to five authors (the justice and their clerks for that term), pairwise classification was used to distinguish between authors (Hastie and Tibshirani, 1998). In order to demonstrate that the results are not an artifact of any particular classification method, the results from the SVM classifier were compared to a weighted k-neighbor classifier trained using leave-one-out cross-validation. Each classification model was trained over 100 divisions of the documents into test and training sets, and the performance of each iteration was recorded.

Figure 1 plots the results of the authorship attribution models and the inferences of these models over the court opinions. The lines plot the empirical 95% confidence interval around the average classification success rates of each model on the test data sets, by model and by justice. The success rate of each model on the test data sets is high, averaging in excess of 99%, and the range of average success rates between the models over the chambers of the justices is relatively small (even the worst-performing model accurately attributes an average of 96% of the documents). Larger confidence intervals are due to a small proportion of training-test draws being unable to distinguish between clerks effectively. These accuracy rates compare favorably to classifiers run on other corpi with comparable numbers of candidate authors (Grieve, 2007). The models are able to differentiate accurately between the writing style of the justices and their clerks.

[FIGURE 1]

Each model was then extrapolated over the opinions, and the percentage of opinions attributed to the justices was recorded. The points plot the percentage of opinions attributed to the justices, by model and by justice. For each model, over 99% of the cases were attributed to the justices. The variation in attribution rates by chamber is small - all attribution rates to the justices are in excess of 97%. The 0-3% of cases attributed to the clerks is within the

²² For a complete description of the technique and its application in pattern recognition, see Burges (1998), Joachims (1998), Juola (2006), or Suykens (2002).

error rate of each model, overall and by justice.

In order to pinpoint those cases where the attribution of an opinion to a clerk is more than model error, I isolated those opinions attributed to any clerk on more than 10% of the iterations any model. This left nine opinions. On only three of these opinions did two models attribute the case to a clerk. No opinions were attributed to the clerks by three or more models. These nine opinions are listed in Table 1.

[TABLE 1]

5 Borrowing Language

While the overall style of the opinions is significantly closer to the style of the justices, particular phrases and components of the opinion may still be lifted from the work of clerks. In order to discern the extent that opinions lifted material from various sources, WCopyfind 2.6, a plagiarism detection tool, was run on the documents.²³ Following Corley (2008) and Calvin and Corley (2009), I set the shortest phrase to match at six words, the shortest string to consider at 100 words, and enabled the program to bridge across up to two words while matching strings. The program was set to ignore letter case, numbers, punctuation, and non-words.²⁴

The memos of the clerks are not the only source the opinions are likely to lift material from. Opinions incorporate a significant proportion of the phrases in the briefs of parties and lower court opinions, tending to respond to the prestige of the source (Corley, 2008; Calvin and Corley, 2009). While justices are generally posited to craft their opinions strategically, existing work has not documented the responsiveness of 'borrowing' to policy-related factors, and has generally focused exclusively upon the majority opinion.²⁵ In order to extend these

²³ This program can be obtained for free from http://plagarism.phys.virginia.edu.

²⁴ This prevents the program from matching citations to the same case.

²⁵ Since the majority opinions tend to be longer than other sources, and generally require extensive research into the case record, they likely incorporate the most material from other sources, and may tend to overstate the importance of contributing documents, particularly the clerk memos.

previous results and provide some context for the incorporation of phrases from memos in the 1986-1993 terms, I generated datasets of two additional sources likely to shape the opinions of the court: parties' briefs²⁶ and lower court rulings.

The certiorari memos authored by clerks exert a relatively small influence on court opinions. On average 3.72% percent of any opinion was directly borrowed from the certiorari pool memos. Other sources contribute relatively more to the final opinion. For example, the average percentage of the opinions drawn from the briefs of either party was 6.60 percent and the average drawn from the lower court opinion was 7.24 percent.²⁷

[TABLE 2]

The relatively limited pattern of limited clerk influence is further supported by disaggregating the opinions by type. As shown in Table 2, while clerks undoubtedly contribute to the language adopted, their influence is small relative to other sources for every type of opinion. Majority opinions tend to draw more extensively from both clerks and alternative sources, compared to other opinion types.

The patterns of selective incorporation of documents into opinions broadly supports the argument that the justices respond to policy considerations. Justices have a diminished incentive to craft high quality opinions where doing so is unlikely to alter the policy outcome adopted. Table 3 shows the percentage of the opinion drawn from each source by the distribution of votes in the case, considering only cases where the entire court voted on the case. In general, the larger the majority, the more of the opinion that is borrowed from the brief of the winning party.

[Table 3 about here.]

The variation in the adoption of these materials by each justice is examined in the figure above. Figure 2(a) examines the adoption of lower court materials by each justice,

²⁶ These were collected from Lexis-Nexis and Westlaw. For the purposes of this study, only the briefs of the petitioner and respondent were considered.

²⁷ These results are similar to other studies of the adoption of language from briefs and lower courts. Corley (2008) found 10.1% of the opinion was adopted from parties' briefs, while Calvin (2009) found 4.32% of the brief was drawn from lower court opinions.

differentiating between opinion holdings that affirm and overturn the lower court's reasoning. Figure 2(b) charts the incorporation of briefs into opinions, differentiating between briefs with ideological affinity to the holding of the opinion and those opposing. Figure 2(c) displays the variation in adoption of the language of the certiorari memo by justice. In each figure, the justices are arranged from left to right by their average ideal point over the period.²⁸

These figures illustrate several important trends in opinion authorship on the Supreme Court. For all justices, the initial impressions of the clerks as expressed by the certiorari memos play less of a role in the final opinion than either the briefs or the lower court opinions. For every justice, the percentage of the opinion adopted from the memos is one-half to one-third of the material adopted from the lower court or the briefs. Justices generally incorporate material selectively - relying more extensively on lower courts and parties (though only weakly) that support the opinion's reasoning. While differences exist in the adoption of clerk memos by opinion type, for each justice this effect is marginal. Moreover, no opinion draws extensively on the clerk memos, even the most extreme outlier adopts just over of the 30% of the material from the memos.

These figures are equally important for the trends that find no support. Contrary to the assertions of commentaries on the court, there is no discernible ideological pattern to the incorporation of material, regardless of source. Moreover, while there is some variation in the incorporation of material between chambers, no set of opinions is radically different from the other justices.

[FIGURE 2]

To examine the factors that shape the decisions of justices to incorporate material from courts, parties, and clerks, I ran several regressions with the percentage of material incorporated as the dependent variable. Since the percentage of material incorporated is censored

²⁸ Justices Ginsburg and Burger are excluded from the charts, due to a high proportion of missing data between the three sources. Chief Justice Burger retired from the court in 1986. As a result, only a few opinions are included in this time period. Justice Ginsburg was appointed to the court in 1993. The set of opinions she authored in this single term was too small for accurate inferences across all three data sources.

at zero and there is a concentration of cases by this lower limit, the Tobit model is appropriate.²⁹ Since the opinions are clustered by the docket id of the case, the standard errors were clustered on the docket number.

Since justices are more likely to use language compatible with the direction of the decision supported in the opinion, I measured the ideological compatibility of the source with the author of the opinion. For the lower courts, compatibility was determined by matching the ideological direction of the lower court decision to the ideological direction of the opinion (Spaeth, 2006).³⁰ For the briefs, compatibility was measured by matching the identity of the winning party in the opinion to the identity of the brief writer. Each variable was coded 1 if the source is ideologically similar, and 0 otherwise.

Several measures were used to capture the importance of the case to the court. The political salience of the case was measured by whether it was covered on the front page of the New York Times the following day (Epstein and Segal, 2000). Since members of the court generally take care to support (or protest) the alteration or overruling of precedent, I include whether the case 'overrules' one or more existing precedents (Spaeth, 2006). Since divided cases are more likely to be contentious and thus require more attention from members of the court, I measured the difference between the number of justices who agreed with the disposition of the majority and the number in dissent. The resulting variable captures the extent that the vote is supermajoritarian.³¹ Given allegations of differences in the use of clerks and patterns of authorship between the chambers of the justices, each of the models incorporates justice-level fixed effects. Given the special importance of First Amendment law during the early Rehnquist court, I also controlled for this time period.

[Table 4 about here.] [Table 5 about here.] [Table 6 about here.]

²⁹ While censoring for values above 100 percent is theoretically possible, no case incorporated more than fifty percent of material.

³⁰ As a rough approximation, concurrences were coded as in the same direction of the majority/plurality and dissents were coded in the opposite direction of the majority/plurality opinion. Cases that affirm in part and dissent in part from the majority opinion were excluded from analysis.

³¹ The size of the majority alone is an insufficient measure of supermajoritarian outcomes, since a full court is not required to vote on a case.

The opinions are generally responsive to both measures of salience. These results confirm earlier findings that the proportion of material adopted in the case increases with the size of the majority on the court, across all three sources. The difference between a divided court (5-4 split) and a unanimous opinion (9-0) is an increase in the proportion of the opinion lifted by approximately 1-2% of each source. Moreover, cases that appear in the New York Times are dramatically less likely to lift from other sources, reducing the percentage of the opinion lifted from 1.5% to 0.5% of the opinion. Given the average length of the opinions studied (approximately 3000 words), this represents an average of two to three additional sentences lifted from each source.

5.1 Justice Concerns

These results enable a more detailed examination of the variation in the adoption of material by chamber. As noted above, while the justices are more likely to incorporate material that supports the direction of the opinion adopted in the case (an additional 1% of the opinion), no results support the contention that the adoption of material varies by the ideology of the justices.

Several intriguing patterns of authorship are evident. Contrary to expectations, across all three sources, the opinions of Rehnquist lift significantly more material than the other justices (1-2% from each source). Unfortunately, I am unable to distinguish whether this effect is attributable to serving as Chief Justice, or particular to Rehnquist. Too few cases cover Burger's term as Chief, or Rehnquist's time as an associate justice. Justice Stevens, generally posited to write the first draft of all his opinions rather than delegate this task to clerks, does not draw significantly less information from the memos of clerks or any other source compared to the other justices.

The results help place the influence of clerks in comparative perspective, tempering allegations of undue influence. While Marshall's opinions do incorporate more material wholesale

from the certiorari memos than several other justices, the substantive effect is marginal (an increase of less than one percent lifted). Moreover, both Rehnquist and Thomas pull far more material from the cert memos, contrary to the expectations set by clerk interviews.

It is important to note, however, that the limited variation between justices may be due to the period under study, as this study does not incorporate any of the notable instances where a justice served during a period of protracted medical illness, as with the end of Justice Douglas's service.

6 Conclusion

Law clerks are no 'legal Rasputins,' funneling their own preferences into opinions without regard for the justices. Contrary to the findings of the literature that relies on surveys and insider accounts of the clerks to assess their own influence, the general style of the opinions is not reflective of law clerk influence, instead bearing a close resemblance to the published work of the justices and their preexisting opinions. Justices are overwhelmingly the authors of their own opinions. While clerks do not control the opinion, neither are they powerless. Their words are incorporated into the opinions of the court, albeit to a limited extent and less than a variety of other sources. While the first draft and initial impressions on a case may be delegated to the clerks, the language of the draft is not that of the final opinion. On the Supreme Court, the process of editing opinions removes traces of clerk influence. Indeed, if "the key to good legal writing is rewriting," then the quality of the opinion is attributable to the justice (Mahoney, 1988, p 343).

These findings demonstrate that Supreme Court opinions are meaningful expressions of the policy considerations of the justices. It is a mistake to conceptualize law clerk influence as something over and against the influence of the justices. The incorporation of materials varies in response to the policy environment of the justices, reflecting the costly nature of opinion writing and its general purpose as a policy document. On cases where the opinion matters less, the justices rationally respond by lifting material. These changes, however, are always at the margins, constituting no more than a few paragraphs out of the whole opinion. These texts are overwhelmingly the products of the justices, and thus reflective of their preferences and thinking on the case. This study thus contributes to the emerging work on the court using texts as data, by finding its assumption that opinions are reflective of the justice's preferences over judicial policy to be well grounded.

This study provides a firm theoretical grounding for future work using measures of the preferences of the justices derived from the language of the opinion, as well as a sound theoretical basis for existing work in this direction. Previous linguistic approaches to the court have been limited by the specter of clerk authorship, particularly allegations that the language and minutiae of the opinion are attributable to the clerks, rather than the justices (Wahlbeck and Sigelman, 2002; Lazarus, 1998). This study mitigates these concerns. The language of the opinion is the product of the justice; even citations - long conceptualized as mere afterthoughts to the writing process - are informative, thus validating previous approaches along these lines (Clark and Lauderdale, 2009; Fowler and Jeon, 2008).