

The Unilateral Presidency, 1953–2016*

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Abstract

Though unilateral powers are central to the modern presidency, existing scholarship on their exercise has several key limitations. Theoretically, scholars focus largely on divided party government as a contributor to unilateral action but pay less attention to other potential institutional and political constraints, while empirical research studies executive orders while largely overlooking other unilateral directives. We argue that modern presidents utilize unilateral powers in ways that respond to incentives and constraints provided by Congress, the courts, and public opinion. Using new data and text analysis to identify substantively significant unilateral directives issued between 1953 and 2016, we demonstrate that presidents issue more [fewer] unilateral actions as ideological conflict with Congress [the courts] increases and when presidents are aligned with public attitudes. Our findings provide new evidence about how adjoining branches of government shape presidents' exercise of power and suggest that unilateral powers are a key tool for facilitating democratic responsiveness.

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Just as in 1787, contemporary debates over the separation of powers in American government focus on the proper scope of presidential power. But though the framers of the Constitution were concerned largely with ensuring that the presidency possessed sufficient tools to protect the nation from the legislature's susceptibility to factionalism and fend off its tendency to usurp executive authority (*Federalist* #10, 48 and 51), modern-day observers from across the political spectrum agree that contemporary presidents are substantially more powerful than their predecessors.

Unilateral powers lay at the center of debates over the bounds of presidential power. Heightened expectations of American presidents combined with constitutional ambiguities provide the incentives and the justification for modern presidents to make increased use of unilateral powers to create policies and reinterpret existing ones without involving Congress. For Moe and Howell (1999a, 132), unilateral action "virtually defines what is distinctively modern about the modern presidency." The conventional wisdom suggests that unilateral powers have contributed to a "new imperial presidency" (Rudalevige 2005), an "executive unbound" (Posner and Vermeule 2010), and a "takeover" of American government (Savage 2007), thereby resulting in "Madison's nightmare" (Shane 2009).

To date, however, political scientists have been more equivocal about the contribution of unilateral action to modern presidential power. Prominent theories of unilateral action emphasize the importance of legislative constraints on a president's unilateral ambitions (e.g., Chiou and Rothenberg 2017; Howell 2003), with presidents reluctant to issue unilateral actions that will provoke congressional retaliation. The vast majority of empirical evidence provides some support for this claim and shows that presidents issue fewer unilateral actions when Congress is controlled by the party opposite the president (e.g., Bolton and Thrower 2016; Chiou and Rothenberg 2014, 2017; Howell 2003; Warber 2006). While presidents may be able to achieve marginal policy gains through unilateral action (Howell 2003), the key conclusion from these studies is that presidents are unlikely to create new policies via unilateral action in the face of congressional opposition. Overall, this research largely dampens normative concerns about unilateral action and the sepa-

ration of powers.

In this paper, we make new theoretical and empirical contributions to scholarship on unilateral action and the presidency. We argue that unilateral powers provide a set of tools that allow modern presidents to attempt to meet the vast expectations placed upon them. The exercise of unilateral action allows presidents a potentially imperfect yet available means of directing the activities of the federal government, fulfilling campaign commitments, advancing key priorities, and addressing legacy considerations. When contemplating unilateral action, we expect that presidents consider both institutional factors, such as the availability of legislative options and the potential for their actions to be overturned by the judiciary, and the political environment, including the likely response from members of the public. Our argument predicts that presidents make greater use of unilateral powers when their preferences are less aligned with Congress and more aligned with the courts and public opinion. Theoretically, our argument emphasizes preference alignment as a contributor to unilateral actions; in contrast, previous scholarship on interbranch conflict and unilateral powers focuses mostly on divided party government across Congress and the presidency and pays almost no attention to how judicial and public preferences shape presidential action. Empirically, we offer the most comprehensive assessment of presidential unilateralism to date by studying unilateral directives that extend well beyond executive orders alone.

We use new data and text analysis to identify substantively significant instances of executive orders, proclamations, memoranda, and other directives issued between 1953 and 2016. Descriptively, our data show that presidents have made greater use of significant proclamations and memoranda in recent decades while relying less frequently on executive orders. Moreover, the results of our analyses are consistent with our argument. Incorporating the full range of substantively significant unilateral actions, we find that ideological divergence between presidents and Congress is associated with greater unilateral acts while ideological divergence between presidents and the courts decreases rates of unilateral action. We further show that presidents exercise

unilateral powers at higher rates when their policy views are aligned with public opinion. Altogether, our findings provide new evidence about both institutional and political constraints on presidential and suggest that unilateral powers may be an important means for presidents to respond to public opinion.

Unilateral Action and the Presidency

Canonical perspectives on presidential power focus on the president's ability to successfully bargain with other political actors (Neustadt 1990). According to this view, presidents are powerful to the extent they can persuade others that they share the president's interests and act to advance them. This characterization of presidential power subsequently generated decades of research that investigates the correlates of a president's success in achieving his preferred legislative outcomes (e.g., Bond and Fleisher 1990; Canes-Wrone 2006; Edwards 1976; Kernell 2006).

More recently, scholars have dedicated increased attention to the capacity for presidents to strike out on their own and realize policy achievements through the exercise of unilateral powers (Belco and Rottinghaus 2017; Bolton and Thrower 2016; Chiou and Rothenberg 2014, 2017; Howell 2003; Moe and Howell 1999*a,b*; Warber 2006). The frequency and saliency of their use by contemporary presidents "virtually defines what is distinctively modern about the modern presidency" (Moe and Howell 1999*b*, 851). Recent presidents have used unilateral powers "to implement many of their most important policy initiatives, basing them on any combination of constitutional and statutory power that is thought to be available" (Shane and Bruff 1996, 131). By taking action at their own initiative, unilateral powers allow presidents to secure policy outcomes which could have eluded them otherwise.

From a normative perspective, politicians, political observers, and legal scholars have expressed concern that unilateral powers allow presidents to create new policies while circumventing an ideologically-hostile Congress. This concern – which scholars have labeled "evasion

hypothesis” (Martin 1999), the “strategic model” (Deering and Maltzman 1999), or the “strong form” of unilateral action (Mayer 2009) – suggests that unilateral action imperils the separation of powers by empowering the president to impose policies outside the constitutionally-prescribed lawmaking process.¹ By issuing directives when legislative victories are scarce or when bureaucratic agencies are more sympathetic to congressional principals (Barilleaux and Kelley 2010; Cooper 1986; Light 1999; Peterson 1993), this perspective emphasizes that presidents use unilateral tools to implement policies that could not be achieved otherwise. Accordingly, some legal scholars argue that “the ambitions of the unilateral presidency cannot be squared with ... the presidency envisioned by our Constitution” (Shane 2009, 5).

Prominent theories of unilateral power, however, emphasize the institutional constraints on a president’s use of unilateral power. According to Howell (2003, 70), for instance, the evasion hypothesis “ignores the constraining effect of Congress.” Theoretical models offered by Howell (2003) and Chiou and Rothenberg (2014, 2017) posit that presidents issue unilateral actions based on strategic calculations about potential responses from the other branches, particularly Congress. When the president and Congress disagree ideologically – precisely the conditions under which the evasion hypothesis suggests presidents make greater use of unilateral powers – members of Congress may be especially inclined to reverse the president’s unilateral action (Bolton and Thrower 2016; Howell 2003; Moe and Howell 1999*a,b*). Because presidents may suffer political costs if Congress were to overturn unilateral actions, therefore, they may scale back their unilateral ambitions as the likelihood of congressional reversal increases.² According to

¹Congressional critics of recent presidential administrations have often characterized unilateral action as a usurpation of legislative authority. See, e.g., Jaime Fuller, “Executive Actions: An Increasingly Common Way for Congress to Hate Presidents,” *Washington Post*, November 17, 2014, available at https://www.washingtonpost.com/news/the-fix/wp/2014/11/17/executive-actions-an-increasingly-common-way-for-congress-to-hate-presidents/?utm_term=.3f5add8e5357; Carl Hulse, “Trump Follows Obama’s Lead in Flexing Executive Muscle,” *New York Times*, January 26, 2017, available at https://www.nytimes.com/2017/01/26/us/politics/donald-trump-barack-obama-executive-orders.html?_r=0; John Bresnahan, “House Democrats Bash Bush Over Abuse of Executive Power,” *POLITICO*, July 25, 2008, available at <http://www.politico.com/blogs/politico-now/2008/07/house-democrats-bash-bush-over-abuse-of-executive-power-010524>.

²In principle, Congress can also constrain unilateral power through statutory means by, for instance, placing limits on how presidents exercise enumerated powers or formulating policy with sufficient detail to narrow the scope

these arguments, therefore, the separation of powers constrains presidents from exercising unilateral powers to achieve outcomes that would not survive the legislative process. A smaller body of research in this area also considers institutional constraints on unilateral action based on judicial review (Fox and Stephenson 2011; Howell 2003) and obstacles that arise within the bureaucracy when crafting or implementing unilateral action (Kennedy 2015; Rudalevige 2012, 2015). Overall, these arguments provide more sanguine views about unilateral powers and the separation of powers due to the constraining effects of other institutions.

Institutional and Political Constraints on the Unilateral Presidency

On both theoretical and empirical grounds, we argue that existing accounts of unilateral power are incomplete. As a starting point, contemporary presidents confront extraordinarily expectations from the public, organized interests, political observers, and historians (Edwards 1983; Howell 2013). If, as Neustadt (1990, xix, emphasis in original) argued about the modern presidency, “*weak* remains the word with which to start,” presidents have strong incentives to attempt to meet these expectations through the prerogatives available to them. Unilateral powers are likely to be an attractive means for presidents to achieve their policy objectives and execute their responsibilities subject to the incentives and constraints provided by adjoining institutions of government and the voters they serve.

First, we argue that presidents have the strongest incentives to advance their objectives via

for executive discretion. However, scholars generally dismiss the strength of this constraint, arguing that “statutory constraint cannot be counted upon to work especially well as a check on unilateral action by presidents” because legislators may sometimes prefer to delegate authority to the executive branch and at other times are ill-equipped to wield precise control over the executive branch’s policy implementation (Moe and Howell 1999a, 141). In addition, the weakness of statutory constraints is likely to confer advantages to presidents who wish to use unilateral powers no matter their partisan or ideological alignment with Congress. We also note that presidents can use unilateral action to frustrate congressional activity without creating dramatic new policies by, instance, preempting legislation or modifying bureaucratic structures (Mayer 1999; Smist 1994).

unilateral action when their preferences diverge from Congress's.³ Under these conditions, congressional legislation is less likely to reflect the president's preferences, which reduces the potential for presidents to realize their key policy objectives while working with Congress. Moreover, due to supermajoritarian requirements in the legislation process, increased ideological divergence between presidents and Congress is likely to reduce the volume of legislation Congress produces (Krehbiel 1998). Presidents therefore face a choice between presenting a lackluster record of accomplishment for judgment by voters and future historians, or else seek alternative means of achieving their goals. Because the latter option offers greater benefits, we expect that presidents make greater use of unilateral powers as ideological disagreement increases between presidents and Congress.

This expectation is generally consistent with the evasion hypothesis yet contrasts with the institutional perspective advanced above. We do not argue that presidents do not consider the potential for congressional retaliation when contemplating unilateral action, as related scholarship argues (Bolton and Thrower 2016; Chiou and Rothenberg 2014, 2017; Howell 2003); instead, we argue that this scholarship overstates the strength of congressional constraints on unilateral action. As many scholars point out (Howell 2003; Moe and Wilson 1994; Moe and Howell 1999a), collective action problems hinder Congress's ability to forge agreement and reverse a president's unilateral action.⁴ Legislators also lack the individual incentives to assert Congress's collective institutional power against a president they believe has overstepped his authority (Devins 2009; Moe and Howell 1999a). These challenges are compounded by growing congressional polarization along party lines over the last four decades (McCarty, Poole, and Rosenthal 2006) and increasingly narrow partisan majorities in Congress (Lee 2016). Moreover, while congressional capacity may have grown during the postwar era (Bolton and Thrower 2016), so too has the president's

³Recognizing that Congress is a collection of 535 individual legislators, for the purposes of this discussion we consider the preferences of the president and a median legislator, though our argument can be applied to any legislator believed to be pivotal in the legislative process.

⁴As Moe and Howell (1999a, 146) argue, "the veto-filled process of generating legislation remains incredibly difficult and costly" such that "Congress is unlikely to reverse" presidential actions that shift the status quo unilaterally.

capacity. The scope and role of the Executive Office of the President has expanded dramatically over the last half-century; for instance, between 1962 and 2017, its budget increased from \$97 to \$411 million (in 2017 dollars) and outpaced the growth in outlays for the legislative branch over the same time period.⁵ These data all suggest that presidents have significant capacities of their own to identify opportunities for using unilateral powers when faced with a hostile Congress and that this capacity may significantly weaken or effectively eliminate the potential for legislative reversal to dissuade a president from exercising unilateral powers.

Second, we argue that presidents consider the potential for a unilateral action to withstand judicial scrutiny. To the extent the decisions issued by judges and justices are shaped by their political preferences (Ferejohn and Weingast 1992; Segal and Spaeth 2002) and presidents issue unilateral actions that reflect their sincerely-held preferences, a president's unilateral action likely has greater chances of surviving challenges in court when the president and the courts share similar preferences. Judicial reversal comes with political costs for presidents (Howell 2003) due in no small part to the greater legitimacy enjoyed by court relative to other political institutions (Caldeira and Gibson 1992). Therefore, we expect that presidents make less frequent use of unilateral powers as the ideological divergence between them and the judiciary increases. Our focus on the courts as a potential constraint on unilateral action is relatively novel within existing literature; while Howell (2003) argues that presidents exercise unilateral authority subject to deference from the courts, to our knowledge no empirical studies directly examine how patterns of unilateral action are responsive to the ideological composition of the court vis-à-vis the president.⁶

Third, we argue that presidents are constrained by public opinion when making calculations about the exercise of unilateral power. While researchers have included presidential approval

⁵These data were obtained from <https://www.whitehouse.gov/wp-content/uploads/2018/02/hist04z1-fy2019.xlsx>.

⁶To the extent Howell (2003) considers judicial responses to unilateral power, the focus in that work is on judicial deference to directives that were issued rather than how patterns of unilateral activity may reflect a president's expectations about subsequent judicial review (see Chapter 6).

ratings in studies of executive order use, and uncovered mixed results (Deering and Maltzman 1999; Fine and Warber 2012; Krause and Cohen 1997; Mayer 1999, 2002), this body of research has paid less attention to identifying how public opinion may constrain or provide incentives for the use of unilateral powers. And though several recent articles focus on public attitudes about and in response to unilateral power (e.g., Christenson and Kriner 2017*a,b*; Reeves and Rogowski 2016, 2018), to our knowledge, only a single published article (Rottinghaus and Warber 2015) links public opinion to patterns of unilateral activity and no study directly studies how public opinion shapes presidents' unilateral strategies. The omission is surprising because, as (Cohen 1997, 1) argues, "though presidents want the freedom to lead as they see fit ... their need for public support constrains them." Indeed, recent research on attitudes toward unilateral power posits that "public opinion may be the strongest potential check on excessive presidential use of unilateral power" (Christenson and Kriner 2017*a*, 336) but does not directly investigate that claim. Presidents are responsive to public opinion in many other contexts, including when they formulate public agendas (Cohen 1997), announce positions on roll call votes (Canes-Wrone 2006; Canes-Wrone and Shotts 2004; Erikson, Mackuen, and Stimson 2002; Stimson, Mackuen, and Erikson 1995), and conduct foreign policy (Baum and Potter 2015; Potter and Baum 2013; Tomz, Weeks, and Yarhi-Milo 2017). We hypothesize that presidents make greater use of unilateral action when their policy views are aligned with the public's, and scale back the exercise of unilateral powers as the president and the public have divergent policy preferences.⁷ Evidence in support of this hypothesis would suggest that unilateral activity provides a form of presidential responsiveness to public opinion and that public opinion may be a meaningful constraint even when institutional constraints are weak or absent.

Existing empirical research on unilateral action, however, provides a consistently incomplete

⁷Following Howell (2003), we assume that presidents use unilateral action only when doing so allows them to realize policy gains. This assumption rules out the possibility, for instance, that liberal presidents create more conservative policies via unilateral action as the public mood grows more conservative. Instead, we posit that the relevant decision context for presidents is whether to use unilateral action to create a new policy, or to simply do nothing.

characterization of presidents' use of unilateral powers. Though scholars recognize that presidents can exercise unilateral powers through a variety of tools, existing literature focuses overwhelmingly on executive orders alone to the exclusion of other forms of unilateral action (e.g., Belco and Rottinghaus 2017; Bolton and Thrower 2016; Chiou and Rothenberg 2014, 2017; Fine and Warber 2012; Howell 2003, 2005; Krause and Cohen 1997, 2000; Mayer 1999, 2002; Warber 2006; Warber, Ouyang, and Waterman 2018). While some researchers have studied presidents' use of other unilateral tools, including proclamations (e.g., Bailey and Rottinghaus 2013; Belco and Rottinghaus 2009; Cooper 1986; Lowande, Jenkins, and Clarke Forthcoming; Reeves 2011; Rottinghaus and Lim 2009) and memoranda (e.g., Lowande 2014), these studies generally overlook potential interdependencies between them.⁸ Not only do executive orders provide an incomplete summary of unilateral activity, but the potential for strategic substitution between executive orders and other forms of unilateral action (see, e.g., Lowande 2014) suggests that executive orders alone may provide a systematically biased assessment of presidents' use of unilateral powers.⁹ Finally, because the president's unilateral toolkit has expanded over time and the interpretation of particular forms of unilateral action has evolved along with it, the concerns outlined above may be particularly acute for studies of unilateral action that span a large number of decades.

We test our three primary hypotheses while addressing the empirical limitations of existing research described above. To recapitulate, we expect that presidents make greater use of unilateral action as their ideological divergence with Congress increases, as ideological divergence with the courts decrease, and when presidents are aligned with public opinion. Results in support of these hypotheses would provide new evidence about the nature of institutional and political

⁸Several recent works have studied multiple unilateral tools (Lowande and Gray 2017; Rottinghaus and Warber 2015) yet these studies have studied these tools separately and do not directly investigate how presidents choose among them.

⁹Executive orders and other forms of unilateral action are largely (though not wholly) interchangeable. As Mayer (2002, 34) writes, "The lack of any agreed-upon definition means that, in essence, an executive order is whatever a president chooses to call by that name." Ellis (2015, 279) further quotes a 1957 report issued by the House of Representatives in which the difference between proclamations and executive orders is described as "more one of form than substance."

constraints on the unilateral presidency and address normative debates over unilateral powers. We now describe the data and methods we use to test our argument.

Data and Empirical Strategy

We address these research questions and limitations of existing research by assembling the most comprehensive dataset available to date on unilateral actions issued by presidents. These data are drawn from the *ProQuest Executive Orders and Presidential Proclamations, 1789–present* database, which contains “a complete collection of numbered and unnumbered Executive Orders and Presidential Proclamations” including 98,118 examples of unilateral action issued since 1789. Importantly, the database also contains the full text of each of these documents. Data on unilateral actions from the ProQuest database significantly expands access to the content of these actions, particularly for documents such as “memo orders” (Woolley and Peters 2017) that have not been systematically classified.

The ProQuest database identifies classes of documents according to 41 Source Record Groups (SRGs). These SRGs range from Numbered Executive Orders and Numbered Proclamations to Lighthouse Land Reservations. We recategorize these 41 SRGs into three groups: *Executive Orders*, *Proclamations*, and *Memoranda*. In *Executive Orders* we include Numbered Executive Orders as well as Unnumbered Executive Orders Relating to Public Lands, and Unnumbered Executive Orders Relating to Indian Reservations. The *Proclamations* category includes Numbered Proclamations and Treaty Proclamations. In the *Memoranda* category we include SRGs identified as Presidential Documents, Manuscript Collections, Weekly Compilations of Presidential Documents, and other sources labeled by ProQuest as containing Memoranda. Relatively few of these documents are labeled specifically as memoranda; many are determinations or appointments. We exclude some SRGs which do not contain unilateral executive actions; a complete accounting of the 41 SRGs, and justifications for their categorization, is shown in Appendix A. Altogether, our

dataset consists of 29,896 unilateral directives issued between 1953 and 2016.

Figure 1 shows the number of documents in each category from 1953 through 2016. It is clear from the data that while executive orders may be the most publicly-discussed form of unilateral actions, presidents quite often make more frequent use of other unilateral tools. Consistent with Lowande (2014), however, by around 1970 presidents began to issue memoranda more frequently than executive orders, and this pattern generally persists through the present. In fact, since 1985 memoranda have generally been the most common form of unilateral action while the number of executive orders has somewhat declined. The number of proclamations issued annually, meanwhile, has gradually yet steadily increased in recent decades. At a descriptive level, the data suggest that executive orders alone do not provide a full picture of presidents' use of unilateral action. Instead, understanding unilateral action in the modern presidency requires considering other directives, including memoranda and proclamations, in conjunction with executive orders.

Measuring the Significance of Unilateral Action

Though the raw data shown in Figure 1 provide a dramatically fuller characterization of unilateral actions than measures found in existing scholarship, all unilateral actions are not created equal. Instead, substantial numbers of unilateral actions concern relatively trivial or mundane administrative affairs. To the extent theories of presidential behavior are concerned with explaining instances where presidents exercise significant policy influence, we must distinguish unilateral actions that are of some policy consequence from those that are administrative or ceremonial in nature (Cameron 2009; Howell 2003). A common approach in the literature is to identify executive orders that received significant media attention from newspapers such as the *New York Times* (Howell 2003), which Chiou and Rothenberg (2014, 2017) expand upon by including a wide range of media sources as well as exogenous measures of the political environment. Other scholarship has classified executive orders on the basis of whether they address major policy, routine administrative affairs, or are ceremonial in nature (Fine and Warber 2012; Warber 2006). More

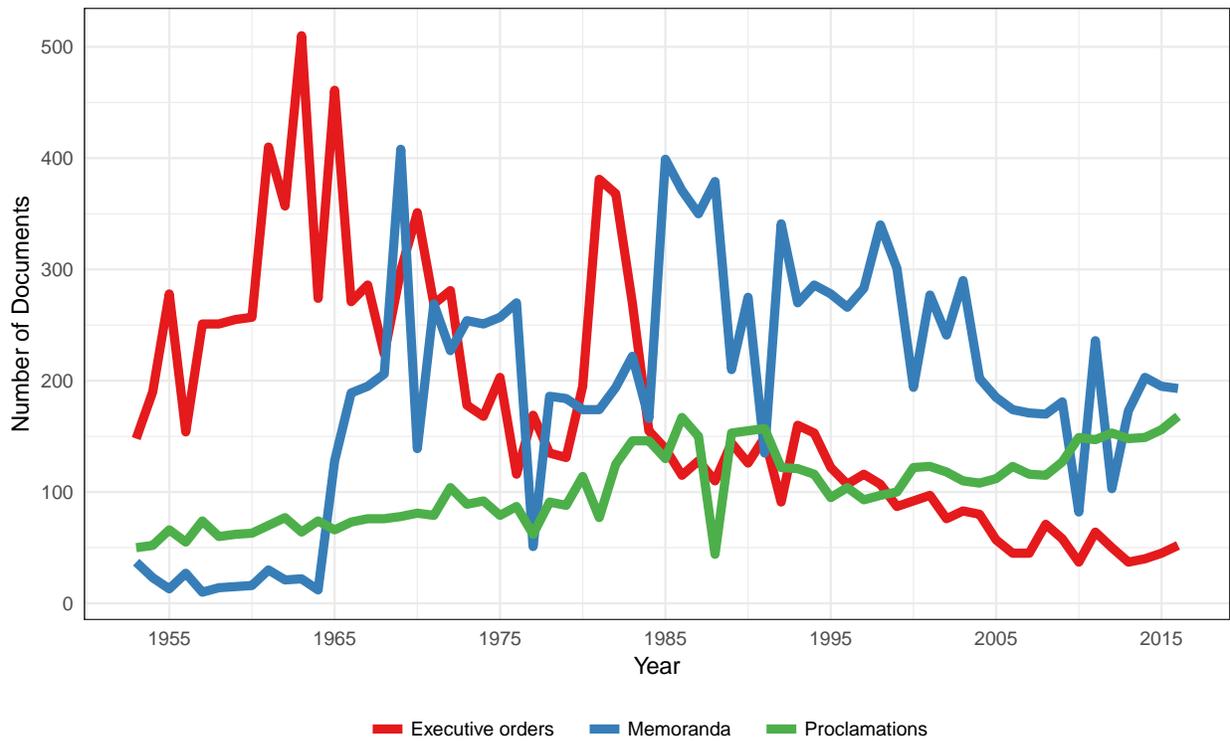


Figure 1: The annual number of documents by category from 1953 to 2016. The documents fall into three categories: Executive Orders; Proclamations; and Memoranda.

recently, Bolton and Thrower (2016) study the issuance of executive orders from 1906 to 2013 and distinguish “nonceremonial” orders from others.

We employ a text-based approach to estimating the policy significance of the unilateral actions in our data similar to Hillard, Purpura, and Wilkerson (2008), which has produced document classifications similar to human judgment with high accuracy and at low cost. The ProQuest database contains PDFs of the presidential documents noted above with text extracted by optical character recognition (OCR). For documents with typed text, this OCR procedure produces high quality text. However, for many earlier and hand-written documents, the OCR-derived text is of poor quality. To improve the data quality in these cases, as well as in cases where more than 10% of the words are not found in a dictionary, we transcribed these documents by hand. Together, these two samples account for 5% of our total corpus. As a validity check, we transcribed 20% of this sample twice; concordance between the doubly-transcribed documents ensures us that our transcriptions are satisfactory.

Our text-based approach improves upon existing approaches to measuring the significance of presidential actions in several key ways. First, in contrast with approaches found in Howell (2003) and Chiou and Rothenberg (2014), our estimates are based substantially on the text of the actions in question rather than indices of media coverage and related factors. While media mentions may be correlated with the policy significance of a particular action, the correlation likely is fairly noisy and variable over time. Moreover, to the extent that actions which are merely ceremonial but of popular interest receive substantial media attention, and actions which are substantively important but highly technical do not receive media attention, this approach may fail to meaningfully distinguish unilateral action significance along a continuous scale. Instead, our approach uses coarsening to identify significant actions above a given threshold of significance without making inferences about cardinality. As a consequence, we will fail to identify a significant action as significant only when a less impactful unilateral action receives so much attention that it moves from below our threshold to above it, or when the media fail to discuss a significant policy

document, which thus reduces measurement error considerably vis-à-vis Chiou and Rothenberg (2014, 2017). Our approach relaxes the assumption that all significant unilateral actions are likely to receive equivalent media attention, as levels of popular interest may vary with the policy in question and the nature of the media environment may shape uptake of particular actions. Second, our approach is easily scalable to evaluate the text of thousands of presidential documents in a relatively short period of time. And third, by using machine learning rather than human coders, we help to avoid many of the biases that are associated with subjective evaluations.

We use the text of presidential unilateral directives and a supervised learning approach to text analysis (e.g., Colleoni, Rozza, and Arvidsson 2014; Gentzkow and Shapiro 2010; Hopkins and King 2010; Thomas, Pang, and Lee 2006) to estimate the substantive significance of each action.¹⁰ We follow a standard methodological procedure in the Text as Data literature to perform supervised learning consisting of six steps: (1) Collect a training corpus which differs along the dimension of interest, (2) label each document in the corpus corresponding to its location along the dimension of interest, (3) convert the corpus to a data set, (4) train a supervised model on the data set and training labels, (5) use the model to predict the labels for out-of-sample documents, which are the ultimate quantity of interest, and (6) examine the results for face validity. We detail these five steps below.

Training Data. We begin with the data set described above: the ProQuest database of executive actions. This database includes such important directives as the Japanese Internment executive order (EO 9066) and documents as mundane as Lyndon Johnson appointing four new members¹¹ to the Committee on the National Medal of Science (Document 1967-53-24).

¹⁰Supervised learning requires labeled example documents from which to learn a relationship between words and a label. Tools like regularized regression, support vector machines, random forests, and neural networks then use those examples to estimate a complex functional form.

¹¹These members were James Shannon, Harry Hess, Max Peters, and John Edsall.

Document Labeling. Of these documents, we identify the numbered executive orders from 1933 to 2017, and match executive order significance estimates from Chiou and Rothenberg (2014) to their corresponding executive order text. As well, we identify numbered proclamations from 1933-2017 and use undergraduate research assistants to label each proclamation as substantive or ceremonial. This subset of the documents matched to their significance estimates constitutes the Training Set; the remaining documents without significance estimates constitute our Test Set. While the estimates from Chiou and Rothenberg (2014) are continuous from roughly -1 to 3, the proclamation scores are dichotomous. We therefore coarsen the continuous estimates to a binary indicator at the threshold of 0.5, and show in Appendix A that our substantive results are robust to this choice of threshold.

Text to Data. To convert the training set and test set into a data object that can be analyzed quantitatively, we use the documents in our corpora to create term-document matrices of unigrams and bigrams (Spirling et al. 2016). That is, each document is a row in a matrix, and each unique lexical feature is a column. Entries in this matrix indicate how many times each lexical object occurs in each document. In this case, columns of the data set include unigrams, which are single words, and bigrams, which are ordered pairs of words. For example, Executive Order 5985 begins: “So much of Executive order of July 9, 1910, creating Coal Land Withdrawal, Montana No. 1, as affects the lands hereinafter described is hereby revoked.” The unigrams in this document include, among others, “executive”, “order”, “coal”, “land”, “affects”, and “revoked;” the bigrams include “Executive Order”, “Land Withdrawal”, and “hereby revoked.” As additional preprocessing, we remove all terms which do not occur in at least 5% of the documents. In total, our training term-document matrix has 3,350 documents and 3,622 terms.

Modeling. Next, we apply standard machine learning tools to model the relationship between lexical features and document significance. We are methodologically and theoretically agnostic as to which model will work best, so we test a variety of them and measure their success using

k-fold cross-validation (Kaufman et al. 2018). Generally, this procedure involves partitioning a training set into a number of non-overlapping random subsamples, training a model on all but one of them, predicting the outcome measure for the omitted subsample, and comparing the model's predictions to the true outcome labels. Stronger correlations with the known estimates generate greater confidence in its predictions for the training set. We employ this procedure using random forest classification (Liaw and Wiener 2002), boosted decision trees (Freund and Mason 1999), support vector machines (Hearst et al. 1998), elastic nets (Hastie, Tibshirani, and Friedman 2009), sparse text regression (Miratrix and Ackerman 2016), logistic regression, and an ensemble of the above methods (Hillard, Purpura, and Wilkerson 2008). We find that random forest model performs best: this procedure successfully identifies whether a document is below or above our significance threshold 75% of the time, with little observable heterogeneity across significance levels (for more details, see Appendix A). This provides confidence that although we are estimating documents' significance with substantial measurement error, that error is unlikely to produce bias in our substantive results.

Estimation. Finally, we use the random forest model to estimate the significance for the remaining 34,331 post-1932 documents in our data set. This includes numbered and unnumbered executive orders, numbered and unnumbered proclamations and memoranda, and other reports, circulars, statements, briefs, and miscellaneous documents signed by or on behalf of the President. The random forest model produces for each document in the test set a *probability* that it is significant. We distinguish significant unilateral actions as those whose scores are greater than the median value of 0.787. While this threshold is admittedly arbitrary, as any threshold would be, the content of these actions suggests that this value meaningfully distinguishes policies of greater consequence than documents with negative significance estimates. Because our scores are measured with error, we do not interpret them in a cardinal way.

Face Validity. We examine the distribution of significance probabilities in our test set, as well as individual documents assigned very high or low probabilities, as an exercise in face validity. Table 1 presents ten randomly selected unilateral actions, ordered by estimated significance, along with their titles. Documents with the lowest probability of being significant is a nominal executive order by Barack Obama on coordinating efforts with Canada to fight climate change in the Northern Bering Sea. There is a cluster of Statements of Administration Policy just below our threshold of significance, followed by an Address by Donald Trump announcing new strategies and policies in Afghanistan. Just above the significance threshold is a note to Congress by Barack Obama announcing the continuation of the the National Emergency with Respect to Zimbabwe. The most significant actions are Donald Trump’s executive order restricting visas, his memorandum approving the Keystone XL pipeline, and his statement announcing the defeat of ISIS at Raqqa, Syria. These latter two documents, perhaps, reflecting the Chiou & Rothenberg bias for media-accessible documents.¹²

We distinguish significant unilateral actions as those whose scores are greater than the median value of these estimates (0.787). While this threshold is admittedly arbitrary, as any threshold would be, the content of these actions suggests that this value meaningfully distinguishes policies of greater consequence than documents with negative significance estimates. Because our scores are measured with error, we do not interpret them in a cardinal way.

Model Accuracy

Our approach using machine coding has three key advantages over human coders: accuracy, consistency, and scalability. A statistical model will produce the same (or very similar) codings for a single document each time it is queried, while humans may not. Machine coding can also produce labels for an enormous number of documents simultaneously, while human coders may

¹²The Statements of Administration Policy, as well as any documents from 2017 and 2018, are not included in our following results. We include them here as an example of our model’s estimates. None of the Statements of Administration Policy exceed our significance threshold.

Accession	Date	Significance	Summary
2016-eo-13754	Jan 21, 2015	0.45	Northern Bering Sea Climate Resilience
2017-58-2165	June 6, 2017	0.60	Statement on Signing the DHS Stop Asset and Vehicle Excess Act
2016-57-062	Sept 13, 2016	0.65	Statement of Administration Policy in Opposition to H.R. 5351, Guantanamo Detainee Transfer Prohibition Act
2017-57-104	July 24, 2017	0.70	Statement of Administration Policy in Support of H.R. 3219, Make America Secure Appropriations Act, 2018
2016-57-040	May 24, 2016	0.71	Statement of Administration Policy in Opposition to H.R. 5233, Clarifying Congressional Intent in Providing for DC Home Rule Act of 2016
2017-53-081	Aug 21, 2017	0.72	Address to the Nation on United States Strategy in Afghanistan and South Asia From Joint Base Myer-Henderson Hall, Virginia
2016-53-022	Mar 02, 2016	0.79	Message to the Congress on Continuation of the National Emergency With Respect to Zimbabwe
2017-eo-13802	Jan 19, 2012	0.85	Amending Executive Order 13597 - Establishing Visa and Foreign Visitor Processing Goals and the Task Force on Travel and Competitiveness
2017-04-019	Jan 24, 2017	0.85	Construction of the Keystone XL Pipeline - Memorandum for the Secretary of State, the Secretary of the Army, and the Secretary of the Interior
2017-53-106	Oct 21, 2017	0.92	Statement on the Defeat of the Islamic State of Iraq and Syria Terrorist Organization in Raqqa, Syria

Table 1: Ten randomly selected unilateral actions from the test set. Significance probabilities above our threshold are bolded.

take months or years to do the same. Despite these advantages, machine coding may be less desirable if it is substantially less accurate than human coders. We assess accuracy through two means. The first is through cross-validated AUC, or the area under the precision-recall curve; the second is through comparisons to human coders. Cross-validated AUC measures how well a model measures the relationship between covariates and outcomes in the training data. This is a difficult task: text-as-data methods are best suited to measuring concrete and measurement error-free concepts, while unilateral action significance is anything but concrete. Despite this, we observe notable success in cross-validation accuracy.

When examining binary outcomes, as is the case in our modeling approach, the most common accuracy measures are precision and recall (Ling et al. 2003; Huang and Ling 2005). Precision is the number of correct positive identifications divided by the total number of identifications; recall is the number of correct positive identifications divided by the total number of true positive cases. Taken together, these measures can produce a Receiver operating characteristic (ROC). Consider a model which produces probabilities that an observation is either a 1 or a 0. To measure the accuracy of this model, we must first specify a predictive cutoff. Perhaps we determine that any observation predicted to be 1 with $p > 0.5$ is a 1, and otherwise a 0, then we can measure precision and recall. However, as we vary our predictive cutoff, precision and recall change. The ROC curve captures precision and recall for all values of the predictive cutoff from 0 to 1. The area under the ROC curve, called AUC, is the gold standard standard measure of predictive accuracy for binary classification tasks. In Figure A.1, we present the ROC and AUC for our model with a significance threshold of 0.5.

This result is difficult to interpret without a relevant benchmark. Ideally that benchmark would be the best alternative to using a machine learning model. To establish that benchmark, we trained three undergraduate research assistants to manually code various unilateral actions as significant (1) or ceremonial (0) and compared those human coders' accuracy to that of our

model¹³. We presented the research assistants with 100 executive orders scored according to significance by Chiou and Rothenberg, as well as and 100 other unilateral actions from our data set, and asked the students to code the significance of those documents. We then performed two analyses on these hand-coded significance scores. The first measures inter-coder reliability. An important advantage of machine learning models for coding documents is consistency: the model will yield a similar or identical result every time it is queried. Human coders, however, are often inconsistent. The research assistants' hand-coded executive order significance scores were not highly correlated with each other. Taking the undergraduates in pairs and measuring their percent agreement at coding unilateral actions as significant or ceremonial, the three undergraduates agree with each others at rates of 65%, 71%, and 63%.

In the second analysis, we calculate AUC scores for the three sets of hand-coded documents compared to with Chiou and Rothenberg's scores for the same documents, thresholded at 0.5. If the research assistants' AUC scores, individually or aggregated, are lower than the machine learning model, then we can be confident that the machine learning model is an improvement over the current state of the art. We find that the research assistants' codings produce AUCs of 0.678, 0.673, and 0.653, each of which is substantially lower than the correlation produced by the machine learning model. In practice, when using research assistants to hand code noisy data, it is common to average hand codes to produce a more reliable measure. We take the elementwise average of the three hand-coded significance codes and calculate that the AUC for that aggregated coding is 0.711, which is still substantially lower than our model's overall AUC of 0.92. In sum, these exercises suggest that our machine learning model performs substantially better than trained undergraduate research assistants and provides a dramatic improvement as a consistent and scalable approach for measuring document significance.

¹³The undergraduate coders were asked to research the unilateral actions and assess their policy significance using their own best judgment and knowledge of history.

Robustness Checks

Despite encouraging results for our model’s internal and external validity, we acknowledge several potential threats to our model’s applicability. These threats relate, respectively, to changes in language over time, unrepresentativeness of the training set, and heteroskedastic prediction accuracy. We detail these threats, and provide a suite of robustness checks to them, in Appendix A. To address a key concern related to the changes in language over time, we introduce a temporal cross-validated AUC analysis and show that our accuracy results withstand such scrutiny.

Patterns in Significant Unilateral Action, 1953–2016

Based on the criterion we have adopted for distinguishing unilateral actions with policy significance, Figure 2 shows the annual distribution of significant unilateral actions from 1953 to 2016. As other research has detailed (e.g., Howell 2003), presidents generally made increasing use of unilateral powers to achieve significant policy outcomes over the latter half of the twentieth century, reaching a peak of 525 in 1986. Since then, however, the annual number of unilateral actions has declined to mid-century levels, though this figure increased by about a third during the Obama administration (from 144 in 2009 to 192 in 2016). Nevertheless, the rates at which recent presidents have used unilateral tools pale in comparison to those from the Johnson, Nixon, and Reagan presidencies.

Figure 2 compares the patterns from our data to other commonly-used measures of significant unilateral action with data from Bolton and Thrower (2016), Howell (2003), and Lowande (2014). The detrended correlations suggest that our measure provides new information about the use of unilateral powers. Our measure correlates with the measure of “nonceremonial” executive orders (Bolton and Thrower 2016) at $r = 0.23$ and the correlations are negative and smaller in magnitude with “significant” executive orders (Howell 2005) and memoranda (Lowande 2014). Our data thus provide descriptive information about trends in presidents’ use of unilateral powers

that are not fully captured by existing data sources.

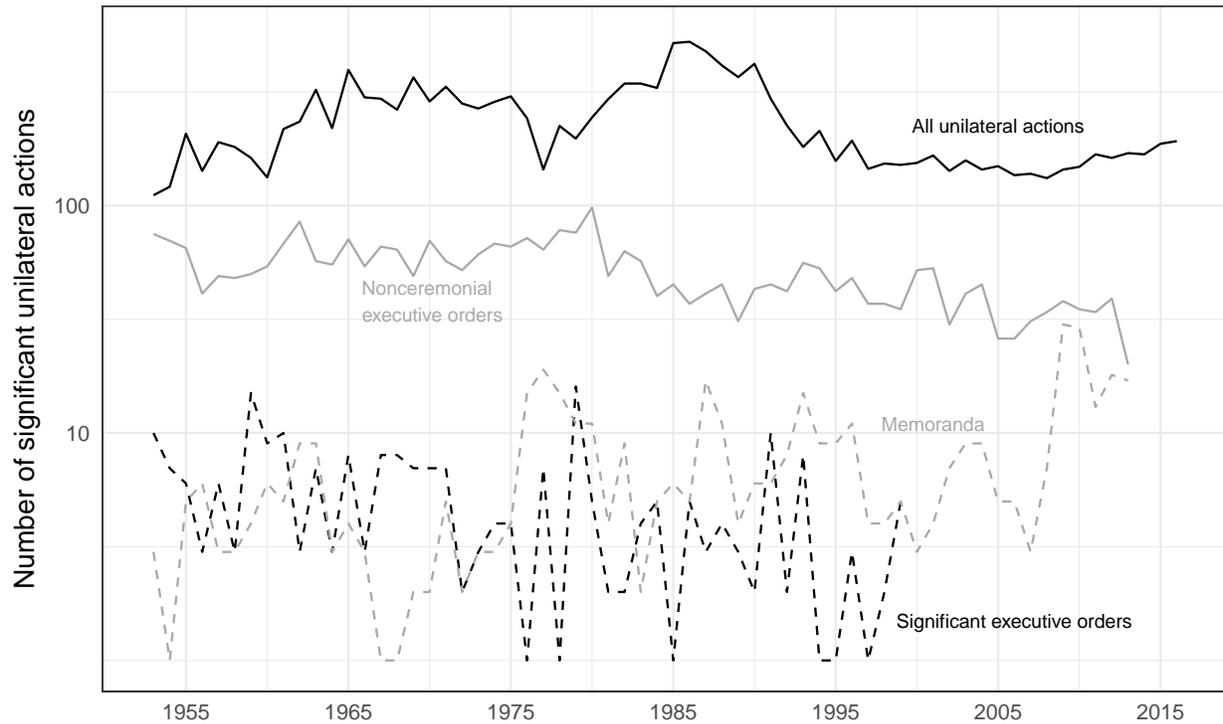
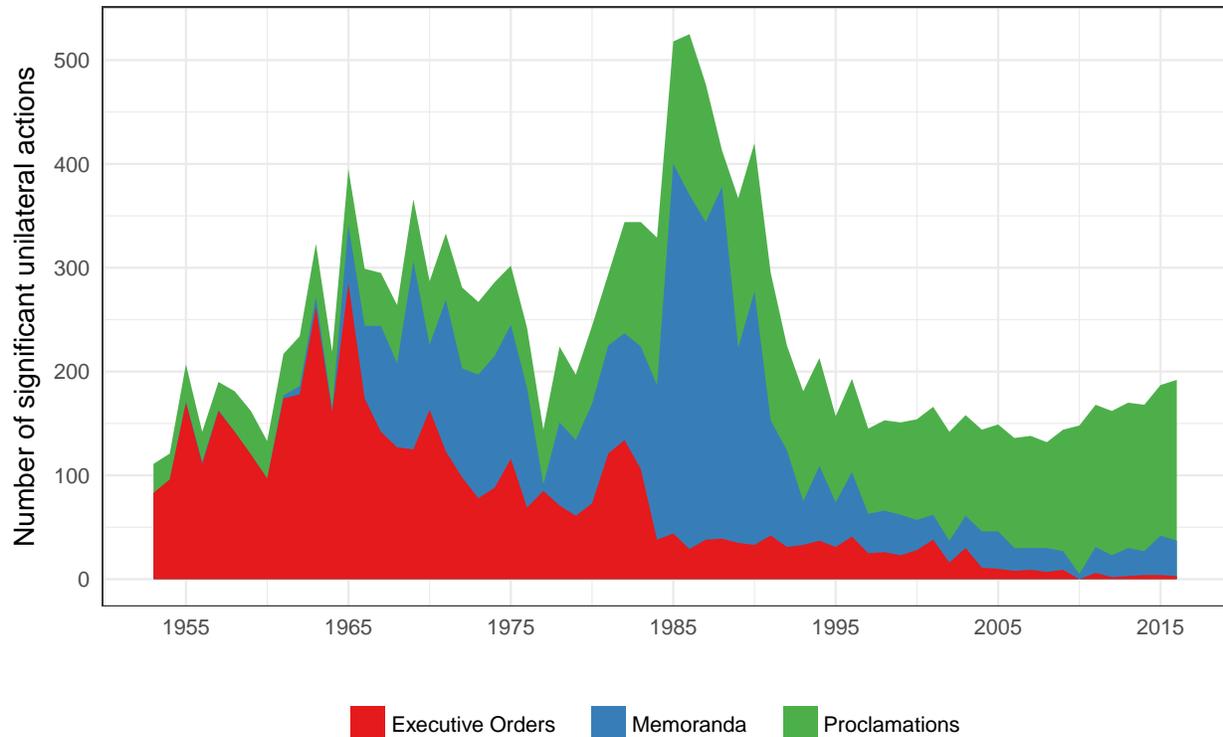


Figure 2: Annual number of significant unilateral actions, 1953 to 2016. The solid line shows the annual number of significant unilateral actions whose significance estimates are greater than zero. The dashed line shows the number of nonceremonial executive orders using data from Bolton and Thrower (2016) and the dotted line shows the number of significant executive orders from Howell (2003). Data on memoranda are from Lowande (2014).

Figure 3 shows how the distribution of significance varies across various unilateral tools. Between 1953 and 2016, executive orders comprised 31% of significant unilateral actions, while memoranda and proclamations accounted for 32 and 37 percent, respectively. These aggregate statistics obscure substantial variation across time, however. In the recent period, executive orders account for far smaller percentages of significant unilateral actions. Before 1980, executive orders comprised more than half (55%) of all significant unilateral actions. Since then, however, only 13% of significant unilateral actions were issued as executive orders. Consistent with Lowande (2014), the data indicate that presidents have made significantly greater use of directives

other than executive orders when issuing significant unilateral actions. Before 1950, for instance, memoranda comprised only 23% of significant unilateral actions; since 1980, 38% of significant unilateral actions have been issued as memoranda. Similarly, proclamations comprised only 21% of significant unilateral actions before 1980 but 49% since then.

Figure 3: Significant Actions by Unilateral Tool, 1953–2016



Our new measure of unilateral action significance generates several new descriptive findings about patterns of unilateral activity in modern American politics. We now use these data to test our hypotheses about congressional, judicial, and public influences on unilateral action.

Modeling Presidents' Use of Unilateral Power

Using the significance scores developed above, we test our hypotheses about the institutional and political factors that shape presidents' use of unilateral powers. Our modeling approach fol-

lows previous research in this area (e.g., Bolton and Thrower 2016; Howell 2003). The dependent variable in our analysis is the number of significant unilateral actions issued by a president in a given year.

Our primary independent variables follow our three hypotheses. First, our argument predicts that presidents make greater use of unilateral powers as disagreement with Congress increases. We use common space DW-NOMINATE scores (Carroll et al. 2009) to characterize the preferences of presidents and the median members of the U.S. House and Senate.¹⁴ Using these scores, we calculate the ideological distance between presidents and the median of each chamber, and characterize *Legislative conflict* as the greater of the two distances. This specification follows the logic that the chamber more distant from the president is the more relevant constraint for a president's ability to secure policy accomplishments through the legislative process.

Our focus on preference-based disagreement between presidents and Congress is consistent with the theoretical approach used in (Chiou and Rothenberg 2014, 2017) but departs from other research in this area which studies interbranch conflict on the basis of divided party government (e.g., Bolton and Thrower 2016; Howell 2003). On the logic that divided government characterizes periods of interbranch disagreement, existing scholarship reports either null or negative findings regarding divided government and the use of unilateral powers in the modern era (Bolton and Thrower 2016; Deering and Maltzman 1999; Gleiber and Shull 1992; Gomez and Shull 1995; Howell 2003; Krause and Cohen 1997, 2000; Mayer 1999, 2001; Mayer and Price 2002; Shull 1997; Warber 2006). However, as political parties have polarized over the last several decades and the distribution of legislative preferences within parties has changed, it is likely that divided government would not have the same consistent effect on a president's unilateral calculations in analyses that cover longer periods of time.¹⁵ Our focus on preference-based disagreement helps

¹⁴These scores were obtained from https://legacy.voteview.com/dwnomin_joint_house_and_senate.htm (accessed April 28, 2018).

¹⁵Scholars have presented several other alternative explanations for these findings. For instance, Shull (1997) argues that presidents use unilateral action to reinforce legislative victories rather than substitute for them; accordingly, because presidents are also likely to achieve greater legislative success when Congress is controlled by his

avoid these issues. If our argument is correct, we expect to find a positive relationship between *Legislative conflict* and the annual number of unilateral actions.

Second, we expect that presidents scale back the use of unilateral powers as ideological disagreement with the courts increases. We measure *Judicial conflict* using judicial common space scores (Epstein et al. 2007) and presidents' common space DW-NOMINATE estimates, both of which are intended to be comparable and are estimated in the same ideological space. In our main analyses, we include the ideological distance between the president and the median member of the U.S. Supreme Court. Of course, the Supreme Court will not review all unilateral actions; indeed, Howell (2003) reports that only about 16% of federal challenges to executive orders in the modern era were reviewed by the Supreme Court. If our argument is correct, however, presidents must anticipate the likely reception the Supreme Court would provide to a given unilateral act, and thus the Supreme Court may be the final judicial arbiter of unilateral activity. However, we recognize that other federal courts may also serve as relevant constraints, and thus in additional analyses described below we characterize *Judicial conflict* using the ideological distance between presidents and the D.C. Circuit and the average distance between presidents and the medians of all federal circuits. If our argument is correct, we expect to find a negative relationship between *Judicial conflict* and unilateral action.

Third, our argument predicts that presidents use unilateral powers to respond to public opinion. To do so, we characterize the alignment between presidents and the public using measures of public mood developed by Stimson (1991).¹⁶ This measure describes “global preferences for a larger, more active federal government as opposed to a smaller, more passive one across the

copartisans, the same factors that boost a president's congressional success also make it easier for presidents to issue unilateral directives. Mayer (1999, 2001) suggests that the finding may be a statistical artifact, reflecting the perfect correlation between divided government and Democratic presidential administrations for most of the post-World War II era. Alternatively, the relationship between divided government and unilateral power may depend on the policy significance of the directive (Fine and Warber 2012) or across different unilateral tools (Rottinghaus and Warber 2015).

¹⁶These measures were obtained from <http://stimson.web.unc.edu/files/2017/08/Mood5216.xls> (accessed March 1, 2018).

sphere of all domestic policy controversies” (Stimson, Mackuen, and Erikson 1995, 548).¹⁷ The measure is commonly used to assess responsiveness to public opinion among actors in a variety of political contexts, including Supreme Court decisions among individual justices (McGuire and Stimson 2004; Mishler and Sheehan 1993) and the Court as whole (Durr, Martin, and Wolbrecht 2000), congressional laws (Erikson, Mackuen, and Stimson 2002), and presidents’ public positions (Erikson, Mackuen, and Stimson 2002; Stimson, Mackuen, and Erikson 1995). We use a mean-centered measure of this measure, *Public mood*, which ranges from roughly -10 to 10 where larger values indicate a more liberal mood.

Presidents, however, are unlikely to use unilateral powers to respond to public mood in the same way. A liberal public mood, for instance, is likely to generate different patterns of unilateral action depending on whether the president shares the public’s view. Given these assumptions, we study the conditional effect of public mood among Republican and Democratic presidents. In the contemporary United States, Democratic presidents have had more liberal policy goals whereas Republican presidents have had more conservative views. If presidents use unilateral action to respond to public opinion, subject to their own policy preferences, we expect Republican presidents to issue greater numbers of significant unilateral actions as the public mood grows more conservative. But as the public mood grows more liberal, Republican presidents are likely to scale back the exercise of unilateral powers. We expect the opposite for Democratic presidents: as the public mood is more liberal [conservative], Democratic presidents should issue more [fewer] unilateral actions. Therefore, we include an indicator (*Democratic president*) for whether the president is a Democrat and its interaction with *Public mood*. Negative coefficients for *Public mood* and positive coefficients for its interaction with *Democratic president* would provide evidence consistent with our argument.

¹⁷In an ideal world, we would have estimates of public opinion across a range of issue ranges and connect those preferences with the ideological content of unilateral actions taken by presidents. To date, however, the field lacks reliable and systematic measures of the ideological nature of unilateral actions. This is an important opportunity for future research and one we hope to address in subsequent work.

With 64 observations at the annual level, we are cognizant of the limits to statistical power that accompany our modeling approach. Nevertheless, we seek to account for other factors that are implicated by existing theories of unilateral power. Therefore, we include a measure of *Gridlock*, which characterizes the median difference across parties in legislators' DW-NOMINATE scores. Larger values of this variable serve as an indicator of increased legislative fragmentation, which may decrease Congress's ability to respond to a president's unilateral acts (Howell 2003). We include an indicator, *Administration change*, for new presidential administrations that represent a change in the president's party. Because a change in the party occupying the White House has implications for the distribution of status quo policies which can be changed by the incoming president, this variable is expected to be positively signed (Chiou and Rothenberg 2014, 2017; Howell 2003). Second, we account for factors which may create incentives for presidents to issue unilateral actions by including variables for the *Inflation rate*, *Spending* as a percentage of gross domestic product, and indicators for years the country is involved in major *War*.¹⁸ Fourth, we include a variable, *Trend*, which accounts for any secular trends in the incentives for unilateral power. In all our models, standard errors are clustered on president.

At the outset, we note the limitations of our empirical approach for identifying potential institutional constraints on presidential unilateralism. We cannot randomly assign presidents to varying levels of ideological conflict with adjoining institutions, and standard approaches for identifying causal effects in observational settings (such as regression discontinuity) require a significantly longer time series than we possess. Moreover, while some research includes president fixed effects to account for potential president-specific confounders (Bolton and Thrower 2016), we follow (Chiou and Rothenberg 2014, 2017) and omit them due to the considerable demands they would place on the data by estimating the within-president coefficients for each covariate.¹⁹ Thus, we estimate a series of models to study our main relationships of interest and

¹⁸Following (Bolton and Thrower 2016), periods of war correspond to the years 1941 through 1945, 1951-1953, 1964-1973, 1991, and 2001-2003.

¹⁹We are particularly concerned about the potential for relatively small changes in ideological alignment within

seek to identify similarities across them.

Results

Table 2 displays the results of our analyses. Columns (1) through (3) each focus on testing our hypotheses one at a time, while the results in column (4) test each of them in the same model. The results in each column provide strong support for our argument. As column (1) shows, the coefficient estimate for *Legislative conflict* is positive and statistically significant, indicating that presidents issue greater numbers of unilateral actions as ideological disagreement increases with Congress. In contrast with a large empirical scholarship which uses indicators of divided party government to emphasize the strength of legislative constraints on unilateral action, our results indicate that presidents make *greater* use of unilateral powers during periods of greater ideological disagreement with Congress. To our knowledge, this is the first finding in the literature that is consistent with the evasion hypothesis, although our argument implies a somewhat different interpretation whereby increased ideological conflict with Congress leads presidents to make greater use of unilateral action to obtain policy accomplishments.

The results shown in column (2) support our second hypothesis. Presidents issue significantly fewer unilateral actions as their preferences increasingly conflict with the preferences of the median member of the Supreme Court. While Howell (2003) presents evidence about the conditions under which courts defer to presidents when their unilateral actions are challenged, to our knowledge no other research has shown that patterns of unilateral activity (rather than challenges) are responsive to the ideological alignment between presidents and the courts. Consistent with our argument, the results suggest that the courts are a meaningful constraint on the calculations presidents make when contemplating unilateral action.

In model (3), we find evidence that public opinion shapes patterns of unilateral action. The coefficient for *Public mood* is negative and statistically significant, which indicates that Republicans, given a president's term to generate substantively larger coefficient estimates.

can presidents issue fewer unilateral actions as public opinion is increasingly liberal. However, the coefficient for the interaction between *Public mood* and *Democratic president* is positive and statistically significant, indicating that the relationship between public opinion and unilateral action is conditioned by the president's partisanship. Democratic presidents, these results show, issue significantly greater numbers of unilateral acts as public opinion moves in a liberal direction. To the extent presidents issue unilateral actions that reflect their own policy preferences, the findings indicate that presidents issue more unilateral actions when their own policy views are aligned with public opinion and fewer of them when they are out of step.

The fully specified model in column (4) tests all of our hypotheses and continues to provide strong support for each. Consistent with the results described above, we find that presidents issue more unilateral actions during periods of ideological conflict with Congress and when they are aligned with public opinion, and fewer of them as ideological conflict with the judiciary increases. We find occasion evidence of systematic relationships between unilateral action and our other covariates, with presidents issuing greater numbers of unilateral actions as domestic spending increases and during periods of war. Interestingly, we find a negative and statistically significant coefficient estimate for *Administration change*, indicating that presidents issue fewer unilateral actions in years following a change of presidential party. None of the other coefficients are consistently estimated to be statistically significant.

Table 2: Presidents' Use of Unilateral Action, 1953–2016

	(1)	(2)	(3)	(4)
Legislative conflict	1.305** (0.376)			1.073** (0.345)
Judicial conflict		-0.468* (0.254)		-0.460** (0.195)
Public Mood			-0.029** (0.011)	-0.019** (0.007)
Public Mood × Democratic president			0.080** (0.020)	0.046** (0.018)
Democratic president	0.122 (0.096)	0.066 (0.191)	-0.057 (0.133)	0.214** (0.092)
Legislative gridlock	-0.193 (0.552)	-0.099 (0.503)	-0.567 (0.446)	-0.601 (0.564)
Administration change	-0.174** (0.081)	-0.142* (0.076)	-0.463** (0.119)	-0.168** (0.066)
Inflation rate (%)	0.008 (0.015)	0.033 (0.030)	0.043 (0.028)	0.030 (0.023)
Spending (% of GDP)	0.076** (0.029)	0.091* (0.052)	0.088* (0.047)	0.064** (0.026)
War	0.279** (0.077)	0.162 (0.120)	0.232** (0.062)	0.184** (0.076)
Time trend	-0.014** (0.003)	-0.007 (0.006)	-0.002 (0.006)	-0.007* (0.004)
(Constant)	4.407** (0.481)	4.244** (1.011)	4.135** (0.861)	4.575** (0.496)
Log-likelihood	-352.41	-362.53	-358.07	-348.26
Observations	64	64	64	64

Entries are negative binomial regression coefficients with standard errors (clustered on president) in parentheses. The dependent variable is the number of significant unilateral acts per year. * indicates $p < 0.10$ and ** indicates $p < 0.05$ (two-tailed tests).

In additional analyses, we find that our results for ideological conflict between presidents

and adjoining political institutions are robust to a number of alternative measurement strategies. For instance, we have estimated models (1) and (4) while replacing our measure of *Legislative conflict* with the ideological conflict between the president and the House and the president and the Senate. These results are shown in Table ?? in the Appendix and are nearly identical to those shown above. We have also estimated models where we measure *Judicial conflict* based on the ideological distance between the president and the median of the D.C. Circuit Court of Appeals, where challenges to executive branch decisions are often filed. In addition, we have used the average ideological distance between presidents and the median of each of the 12 circuits. Both sets of results are strongly consistent with those presented above and are shown in Table B.2.

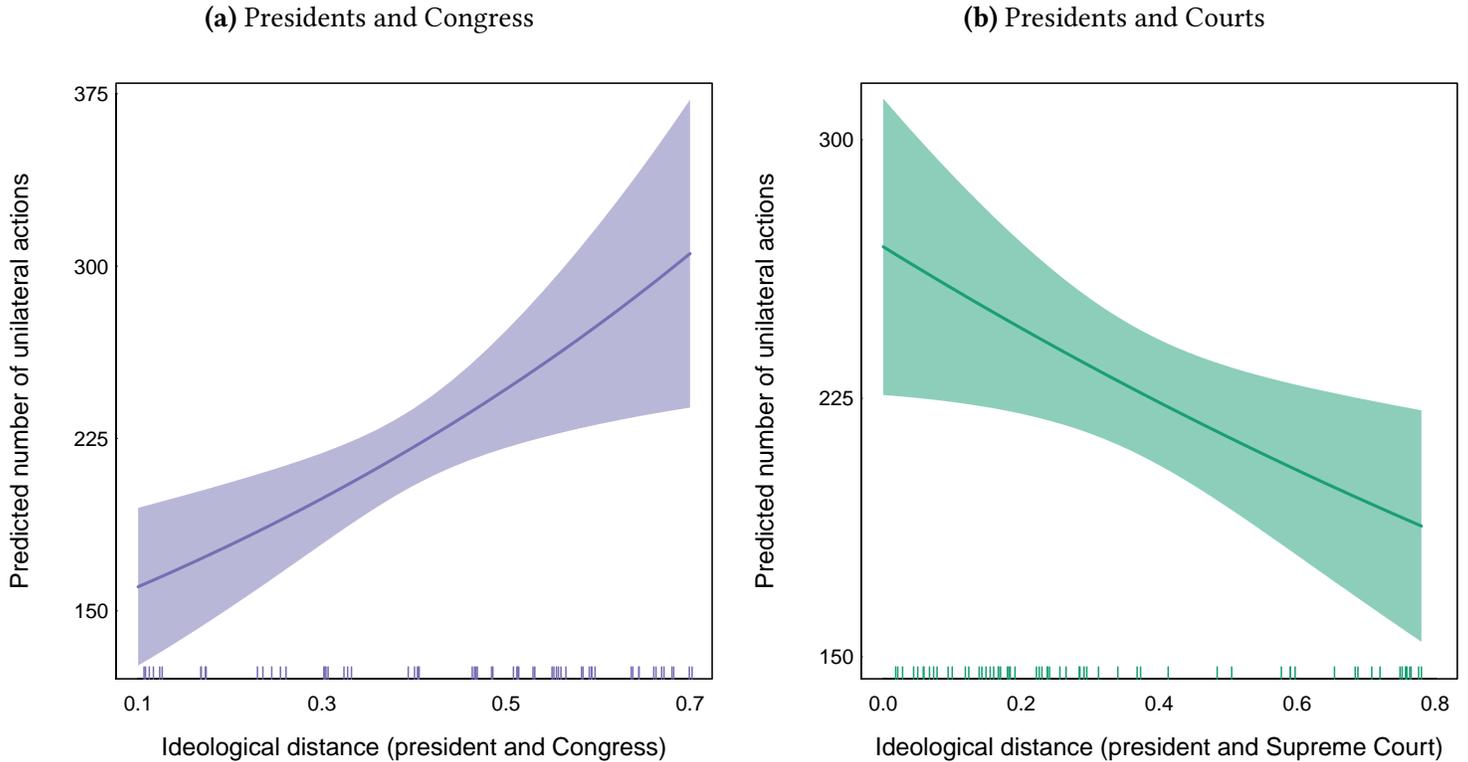
Figure 4 displays the substantive magnitudes of the relationship between unilateral action and ideological conflict with adjoining institutions. The plots use the estimates from column (4) to show the predicted number of unilateral actions as institutional conflict increases while holding all other covariates constant at their mean values. The solid line indicates the predicted number of unilateral actions for a given level of ideological conflict and the shaded regions are the 95% confidence intervals associated with the estimates. The tick marks along the x -axis indicate levels of ideological divergence represented in the data.

In the left panel, Figure 4a shows how unilateral activity varies across the range of observed values of ideological conflict with Congress. Compare a circumstance where the level of ideological conflict between Congress and the president is approximately 0.26, which corresponds roughly to Lyndon Johnson and the 90th Congress (1967-68) and Bill Clinton and the 103rd Congress (1993-94), to a circumstance where the level of ideological conflict is 0.62, which is similar to that for George H.W. Bush and the 101st Congress (1989-90) and George W. Bush and the 111th Congress (2007-08). Presidents in the former condition are predicted to issue about 191 significant unilateral actions, while presidents in the latter condition are predicted to issue about 280 significant unilateral acts. This increase of roughly 47 percent corresponds to a two-standard deviation increase in ideological conflict between presidents and Congress and suggests

that unilateral action gains attractiveness as legislative victories for presidents are more elusive.

The right panel (Figure 4b) shows results for ideological conflict between presidents and the Supreme Court. The slope of the plotted line shows a strong negative relationship between ideological conflict with the judiciary and presidents' use of unilateral powers. Consider again a two-standard deviation increase in ideological conflict between presidents and the Court. For instance, when ideological conflict has a value of 0.10, as roughly corresponded to the relationship between Lyndon Johnson and the Warren Court in 1965, presidents are predicted to issue about 257 significant unilateral actions. As ideological conflict increases to 0.60, as characterized Barack Obama's relationship with the Roberts Court in 2011, the predicted number of unilateral actions is 204. Thus, a two-standard deviation increase in ideological conflict between presidents and the Supreme Court is associated with a 21 percent decrease in the number of significant unilateral actions.

Figure 4: Institutional Conflict and Unilateral Action, 1953–2016



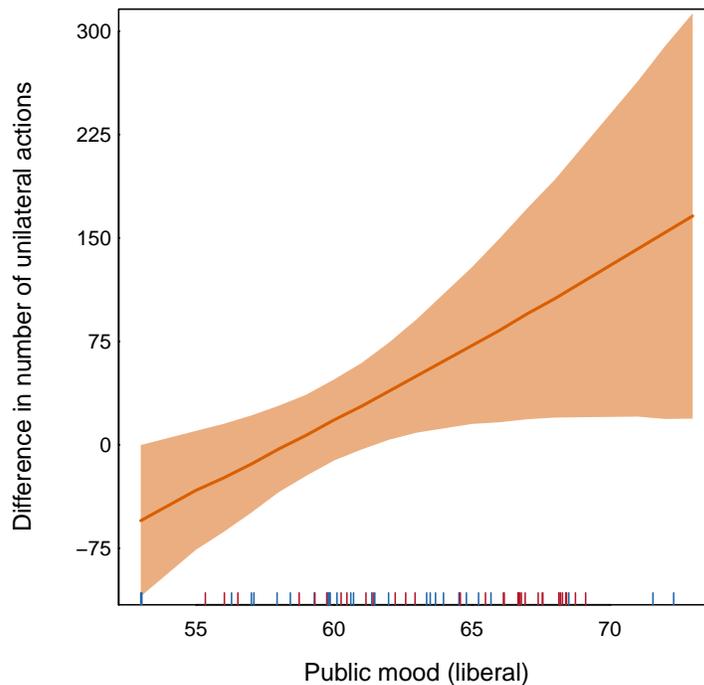
Estimates based on model (4) of Table 2. The solid lines show the predicted number of unilateral actions issued by presidents across the range of values of ideological conflict between presidents and Congress (Figure 4a) and the Supreme Court (Figure 4b). The shaded areas represent the 95% confidence intervals associated with these estimates. The tick marks along the x -axis illustrate the observed distribution of the independent variables.

Figure 5 below displays the substantive relationship between public opinion and unilateral action.²⁰ Based on the estimates shown in column (4) of Table 2, the plot shows the marginal effect of a Democratic president (compared to a Republican president) on the predicted number of significant unilateral actions across the range of values of *Public mood*. A two-standard deviation increase in public mood in the liberal direction decreases the number of unilateral actions issued by Republican presidents from 230 to 192, or roughly 17 percent. A similar increase in public liberalism increases the number of unilateral actions by Democratic presidents from 227 to 297, or roughly 31 percent. Accordingly, Figure 5 shows that Democratic presidents issue greater

²⁰For readers who would prefer to view these results in terms of the predicted number of unilateral actions separately for Democratic and Republican presidents, please see Figure B.1.

numbers of unilateral actions than Republican presidents when public opinion is more liberal, and this difference increases in the level of public liberalism. Altogether, the findings indicate that presidents issue unilateral actions at greater rates when their own views are increasingly aligned with the public’s views and suggest that public opinion may be an important source of constraint for presidents contemplating unilateral action.

Figure 5: Public Opinion, Presidential Responsiveness, and Unilateral Action



Estimates based on model (4) of Table 2. The solid lines show the marginal effect of presidential partisanship on the predicted number of unilateral actions issued by presidents across the range of values of *Public mood*. Positive values indicate more unilateral actions issued by Democratic presidents than Republican presidents. The shaded areas represent the 95% confidence intervals associated with these estimates. The tick marks along the *x*-axes illustrate the observed distribution of *Public mood* across Republican (red) and Democratic (blue) administrations.

Our results provide new evidence about the institutional and political factors that shape presidents’ calculations about the feasibility for and necessity for unilateral action. We find that ideological conflict with Congress and the courts operates in competing fashion as constraints on unilateral power. Increased disagreement with Congress creates incentives for presidents to ex-

ecute their policy objectives in alternate ways, including through the use of unilateral power. However, presidents appear to be mindful of the potential for judicial review to strike down their actions, as unilateral action decreases as presidents and the Courts exhibit greater ideological disagreement. Moreover, unilateral power may be an important tool for presidents to respond to public opinion. Presidents use unilateral powers at greater rates when their policy preferences are aligned with the public's, but appear less willing to exercise prerogative power when confronted with a public that may respond disapprovingly to a presidential action used to achieve goals the public does not share.

Conclusion

Unilateral action is one of the most distinctive features of the modern presidency and is perhaps more publicly salient than it ever has been. Its use by recent presidents has prompted legal scholars and political observers to express concern that unilateral powers erode the Madisonian system of separation of powers.²¹ To date, however, political scientists have been relatively more measured about the importance of unilateral authority for the balance of power among American political institutions. Across the dozens of studies on presidents' use of unilateral action, few if any have shown that presidents are more likely to issue them during periods of institutional conflict between presidents and Congress – precisely the context in which presidents might be most tempted to use them.

Our paper breaks new substantive and methodological ground in studying the presidency and unilateral action in particular. Theoretically, we posit that unilateral powers are important means for presidents to achieve their programmatic commitments, respond to public expectations, and advance their legacies. As such, we provide an integrated account of how presidents' unilateral calculations reflect both institutional constraints and political factors. Moreover, we argue that

²¹See, e.g., <https://www.nytimes.com/roomfordebate/2014/01/29/presidential-power-vs-congressional-inertia/presidents-cannot-ignore-laws-as-written>.

existing studies substantially mischaracterize the use of unilateral powers by focusing almost exclusively on executive orders without accounting for the other tools of unilateral power that presidents wield. Methodologically, we introduce a new text-based approach to estimating the policy significance of a vast repository of presidential documents that describe unilateral actions. So doing, we provide new data on presidents' unilateral activity over much of the last century and new evidence that public opinion may be a more significant source of constrain on unilateralism than the adjoining branches of government.

Our findings provide a somewhat more sanguine account of unilateral power than that offered by many legal scholars and contemporary observers. Patterns of unilateral action are strongly responsive to the ideological composition of the courts, which suggests that presidents whose views are out of step with the judiciary tempt fate by issuing unilateral actions that are likely to receive challenges in court. And while unilateral action may be inconsistent with some normative conceptions of the separation of powers, our results suggest that unilateral action may be an important tool for achieving democratic responsiveness. To the extent responsiveness to public opinion is an important normative criterion for democratic governments, unilateral action may not systematically undermine the American system of governance as some claim. Moreover, unilateral action may be a particularly important tool for achieving responsiveness in the current era as congressional polarization has slowed legislative productivity to a trickle and has generated mounting frustration with members of Congress. In addition, our evidence suggests that public opinion may be a meaningful constraint on executives even when other institutions fail to provide stronger institutional checks on presidents seeking to expand their repertoire of powers.

Our evidence about the relationship between public opinion and unilateral power is consistent with a recent body of research that documents public attitudes toward unilateral power. This research program shows that the public tends to dislike unilateral power and responds negatively to its use (Christenson and Kriner 2017*a,b*; Reeves and Rogowski 2015, 2016, 2018), though public reaction to unilateral power is somewhat conditioned by the public support for the policy end

(Reeves et al. 2017; Reeves and Rogowski 2018). However, this research does not directly consider how and under what conditions public opinion might provide incentives or constraints on presidents' use of unilateral powers. We note that two key limitations prevent us from reaching stronger conclusions, however. For one, we depend on the key assumption that presidents only issue unilateral actions that advance their own policy welfare, which rules out the possibility that presidents change their own policy views to match public opinion. Two, our measure of unilateral action does not identify the degree of ideological congruence between a particular unilateral act and public opinion on the relevant issue area. Addressing these limitations is an important goal for further research. Nevertheless, our analysis above provides the first set of findings to suggest that presidents' use of power may be constrained by the opinions of the public they govern.

From a research design perspective, we note the limitations of our study with respect to identifying clear causal evidence of constraints on unilateral action. Though our approach is consistent with those employed in related scholarship, we lack a true counterfactual. In a more ideal world, we would have access to a comprehensive list of each president's policy goals which we could then compare against the list of unilateral actions presidents have issued. This approach would allow us to identify the conditions under which presidents with identical policy goals chose to exercise unilateral powers to achieve them. As such, we are reluctant to make strong inferences about the strength or weakness of various constraints on unilateral action because we cannot dispositively rule out the possibility that presidents may have varying numbers of policy goals that correlate with party control of government or public opinion. Addressing this challenge is a key opportunity for studies of presidential power. These limitations notwithstanding, our study makes important headway into understanding the range of ways through which presidents wield power. In addition, our data and text-based estimates of the significance of presidential action can be used to study a number of other important questions about lawmaking, the presidency, and political institutions more generally.

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A Supplementary Appendix: Model Validity Robustness Checks

We note several important challenges in our measurement strategy and subsequent analyses: language heterogeneity, the rarity of highly significant documents, and heteroskedastic predictive accuracy.

Language Heterogeneity & Unrepresentative Training Sets

First, a critical assumption for our analysis is that the language and word choice indicative of significant executive orders is sufficiently similar to that of other types of significant unilateral action. For example, the tone and style of significant executive orders and proclamations may be very legalistic, while important memoranda may be more rhetorical; if this is the case, then many of the textual features which contribute to a document’s significance may be legalistic, biasing downward the significance of documents other than Executive Orders and proclamations. This problem may be especially severe in cases where the temporal distribution of the training set diverges from that of the test set.

To fortify our model against this weakness, we must expand our training set to include more representative documents. However, since we do not have significance scores for documents other than executive orders, we infer them using a manual matching procedure. We first select a random 500 executive orders from our training set. Then, using the ProQuest Executive Actions database, we manually search for documents which reference one and only one executive order in our random sample. If we find a document which is substantively related to a single executive order, we assign that document the same significance, either 0 or 1, as the executive order it mentions. By assigning equal significance to those two documents, we teach our model to recognize the significance of a wider variety of rhetorical styles. We find matches for 86 of the 500 executive orders in our random sample. Many of those executive orders have multiple matching documents; as a result, our matching procedure adds 287 observations to our training data.

We note, however, that our training data set is still not representative of the full corpus of text. While less than 40% of our training set consists of Executive Orders or Proclamations, they account for almost three quarters of the corpus. A large machine learning literature (Kubat, Matwin et al. 1997; Batista, Prati, and Monard 2004; He and Garcia 2009) suggests that imbalanced training sets produce suboptimal accuracy in predicting the outcomes of minority document types, but it also offers a solution in standard practice. Following that standard practice, we duplicate the 3,350 executive orders four times each and add them to the training set such that the ratio of

proclamations to executive orders in the training set matches that of our overall corpus.²²

Heteroskedastic Predictive Accuracy

A third challenge is ensuring that the model’s predictions, which we aggregate into dependent variables for regressions, are not systematically biased. If the predictions are unbiased by measurement error, that measurement error will force our regression coefficients toward zero. If, however, the predictions are biased, then the regression coefficients may be artificially extreme. Biased predictions may be observable in the cross-validation accuracy as heteroskedasticity.

Importantly, there is little observed heteroskedasticity: our model’s residuals are only weakly correlated with the true significance labels. However, insofar as there is heteroskedasticity, it is among the low-significance documents. Documents which Chiou and Rothenberg estimate to be of very low significance our model often overestimate as being moderately significant. This is critical for performing additional analysis, as any systematic bias in our model’s accuracy would subsequently bias any regression results for which we use our model’s predictions.

Temporal Variation in Modeling Accuracy

A potential criticism of this approach is that our model may underestimate the significance of documents whose text is unlike the text of numbered Executive Orders or proclamations in our training set. Consider, for example, a model trained only on data from the 1940s, used to evaluate the significance of documents from the 2010s. Due to changes in language over time, that model is unlikely to perform well. The same result holds, though, if there are *more* documents from the 1940s than there are from the 2010s.

To test this, we perform a similar cross-validation procedure as in our main results, except instead of each fold consisting of random subsamples, each subsample is a decade of text. This allows us to test whether our model fails to accurately estimate the significance of documents from time periods outside the training set. As Figure A.1 shows, the temporal cross-validation accuracy is lower than the randomly partitioned cross-validation accuracy, providing evidence that the lexical cues indicating document significance do change over time. However, the accuracy of this temporal model is still very high! This gives us confidence that our model is robust to relatively mild changes in language usage, though we still acknowledge that much earlier documents pose a significant estimation challenge. However, as we discuss in the Results section, the measurement error induced by this estimation challenge should serve only to reduce the absolute

²²Our AUC statistics, however, derive from a model *without* this duplication procedure, as it artificially inflates AUC scores.

magnitude of our regression coefficients.

Feature Importance

As a face validity check on our model, we perform a descriptive feature importance analysis. Since random forest models are largely black boxes where features enter and predictions are returned, determining which covariates contribute most to the model's success can be difficult. One commonly used method to extract feature importances from tree-based models involves "feature depth" (Archer and Kimes 2008). Since random forests consist of decision trees that are ordered variable splits, features that systematically appear earlier in the decision tree are more important to the model. A covariate's feature importance, then, is proportional to the average number of times that feature appears in the decision tree, weighted by how early in the tree it appears; more simply, higher values indicate more strongly predictive features.

Note that this is purely a descriptive exercise; if our model performs as we intend, we expect that the most important features it identifies will be ones which intuitively discriminate significant orders, which discuss tariffs, military conflict, and industry, from ceremonial ones, which memorialize the dead or declare National Ice Cream Day. We calculate feature importance for random forests model and present the 20 most important terms below in columns 1 and 2 of Table ??, then 20 largely insignificant terms in columns 3 and 4. Among the most significant words are section, pursuant, provision, necessary, and schedule, which generally indicate appeals to either constitutional or statutory authority. Insignificant terms include bank, south, sponsor, and tent. A feature importance table derived only from executive orders is in Appendix ??.

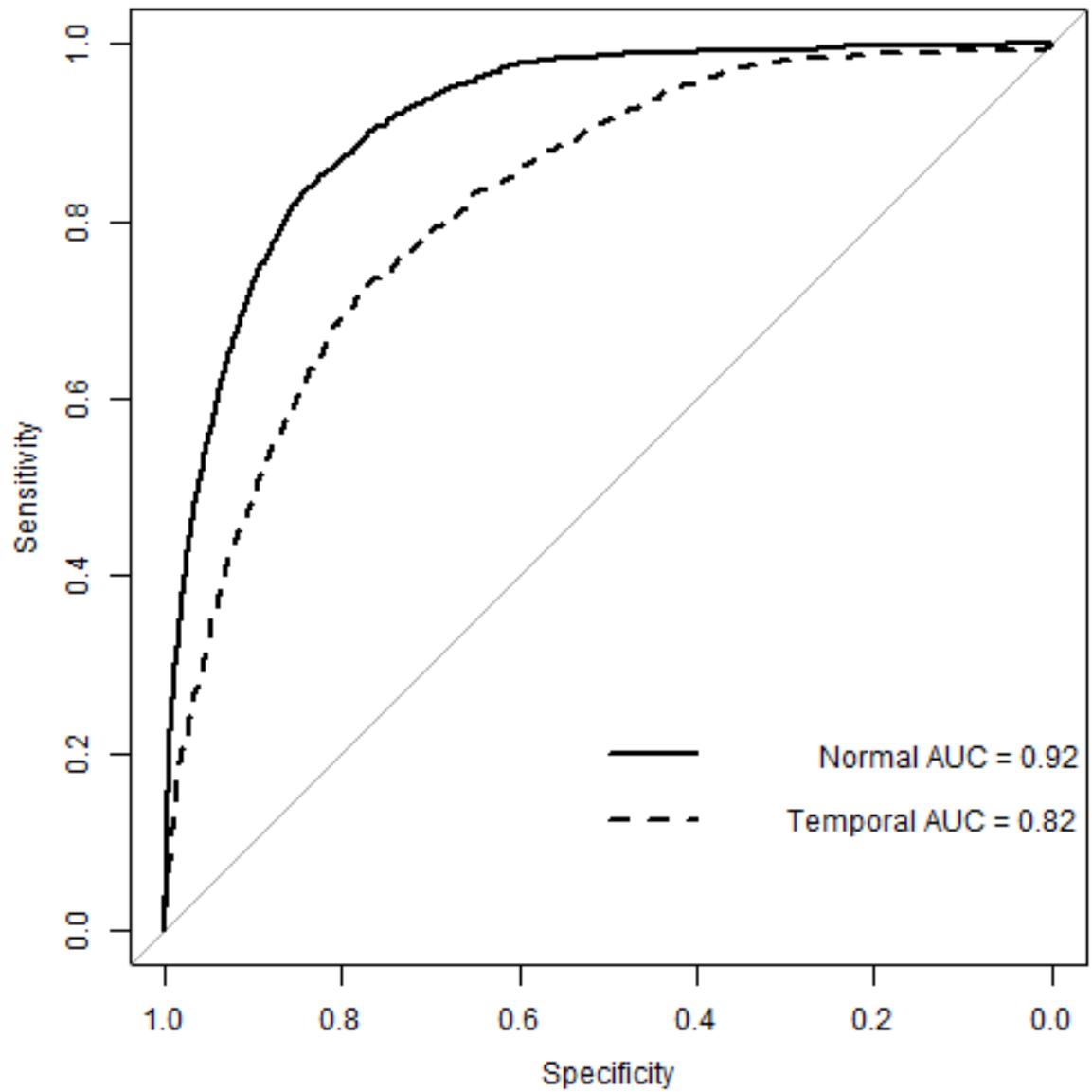


Figure A.1: The cross-validated AUC for the randomly partitioned model lower than the model partitioned by decade, but still shows substantial predictive accuracy.

An initial inspection of our approach to coding presidential documents, therefore, suggests that we have uncovered a meaningful dimension that distinguishes actions based on whether they address consequential policy issues or more are ceremonial in nature.

As well, we examine the feature importances of a model trained on only on executive orders. Among the most significant words, verbs predominate: direct, threat, take, report, enforce, permit, establish, include, create, act, engage, amend. These verbs all relate to the positive powers of the President. The remaining significant terms are policy, law, necessary, agency, nation, act, and person. The insignificant terms include verbs as well (count, resign, counter, repair, hope, roll, undertake, led, recite, hope), but these are verbs are generic and are not associated with the unilateral powers of the presidency. The remaining terms are red, supreme, receipt, northeast, room, 1934, ever, single, Feb(ruary), which, while plausibly related to policy, would not appear differentially in significant actions relative to ceremonial ones.

B Supplementary Appendix: Additional Tables and Figures

Table B.1: Presidents' Use of Unilateral Action, 1953–2016: Alternative measures of judicial conflict

	<i>Distance from DC circuit</i>		<i>Average distance from circuits</i>	
	(1)	(2)	(1)	(2)
Legislative conflict		1.043** (0.336)		-0.180 (0.318)
Judicial conflict	-0.196 (0.130)	-0.223** (0.082)	-1.748** (0.372)	-2.368** (0.174)
Public Mood				
Democratic president	-0.067 (0.177)	0.052** (0.019)	0.124 (0.089)	0.065** (0.024)
Public Mood × Democratic president				
Legislative gridlock	0.332 (0.364)	-0.202 (0.438)	6.732** (2.929)	5.406 (3.335)
Administration change	-0.250** (0.103)	-0.287** (0.100)	-0.016 (0.077)	-0.133 (0.116)
Inflation rate (%)	0.026 (0.031)	0.018 (0.020)	-0.019 (0.017)	-0.034* (0.020)
Spending (% of GDP)	0.112** (0.052)	0.085** (0.028)	0.128** (0.016)	0.105** (0.016)
War	0.203* (0.107)	0.219** (0.071)	-0.051 (0.078)	-0.043 (0.067)
Time trend	-0.012* (0.007)	-0.011** (0.005)	-0.101** (0.026)	-0.097** (0.027)
(Constant)	3.899** (0.884)	4.272** (0.402)	7.836** (0.811)	9.353** (0.368)
Log-likelihood	-362.72	-348.14	-178.68	-174.17
Observations	64	64	64	64

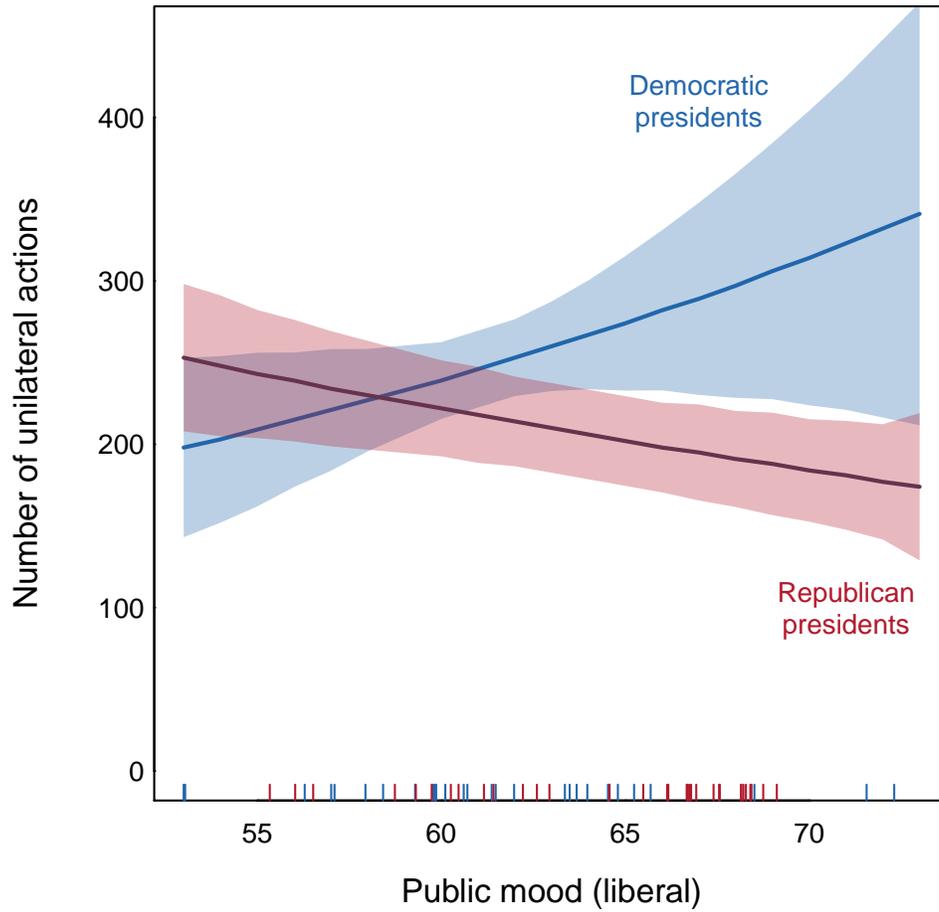
Entries are negative binomial regression coefficients with standard errors (clustered on president) in parentheses. The dependent variable is the number of significant unilateral acts per year. * indicates $p < 0.10$ and ** indicates $p < 0.05$ (two-tailed tests).

Table B.2: Presidents' Use of Unilateral Action, 1953–2016: Alternative measures of legislative conflict

	<i>Distance from House median</i>		<i>Distance from Senate median</i>	
	(1)	(2)	(1)	(2)
Legislative conflict	1.240** (0.362)	1.018** (0.328)	1.042** (0.371)	0.961** (0.336)
Judicial conflict		-0.446** (0.182)		-0.621** (0.241)
Public Mood		-0.018** (0.007)		-0.036** (0.007)
Democratic president	0.076 (0.094)	0.174** (0.087)	0.123 (0.137)	0.245** (0.118)
Public Mood × Democratic president		0.047** (0.018)		0.062** (0.016)
Legislative gridlock	-0.320 (0.555)	-0.710 (0.566)	0.096 (0.570)	-0.592 (0.567)
Administration change	-0.154** (0.076)	-0.159** (0.068)	-0.254** (0.099)	-0.240** (0.074)
Inflation rate (%)	0.009 (0.015)	0.031 (0.023)	0.006 (0.019)	0.023 (0.026)
Spending (% of GDP)	0.065** (0.030)	0.055** (0.026)	0.106** (0.042)	0.078** (0.031)
War	0.313** (0.066)	0.213** (0.069)	0.250** (0.101)	0.131 (0.092)
Time trend	-0.011** (0.002)	-0.005 (0.003)	-0.014** (0.004)	-0.005 (0.004)
(Constant)	4.557** (0.495)	4.679** (0.504)	3.820** (0.691)	4.333** (0.521)
Log-likelihood	-352.28	-347.99	-356.52	-349.11
Observations	64	64	64	64

Entries are negative binomial regression coefficients with standard errors (clustered on president) in parentheses. The dependent variable is the number of significant unilateral acts per year. * indicates $p < 0.10$ and ** indicates $p < 0.05$ (two-tailed tests).

Figure B.1: Public Mood, Presidential Partisanship, and Unilateral Action



Estimates based on model (4) of Table 2. The solid lines show the predicted increase in the number of unilateral actions as the public mood moves in a liberal direction. Democratic presidents are shown in blue and Republican presidents in red. The shaded area represents the 95% confidence intervals associated with these estimates.

C Supplementary Appendix: Source Record Groups

In this appendix we indicate which unilateral action “Source Record Groups” we group into each larger category of unilateral action.

C.1 Executive Orders

This category contains documents which are numbered and unnumbered executive orders.

EO - Numbered Executive Orders 1862-present

03 - Public Land Orders 1942-present

06 - Secretary of Interior Orders 1920-1950

22 - Executive Orders Relating to the Panama Canal 1902-1934

33 - Executive Orders Relating to Public Lands 1841-1935

56 - Presidential Policy Directives & National Security Decision Memoranda

C.2 Memoranda

This category contains Executive Memoranda or other such memoranda from collections of presidential documents.

04 - Presidential Documents 1936-present

21 - Public Papers of the Presidents 1789-present

52 - Miscellaneous Printed Sources 1789-1936

53 - Weekly Compilation of Presidential Documents 1965-present

59 - Presidential Security Directives

C.3 Proclamations

This category includes only documents clearly noted as proclamations.

PR - Numbered Proclamations 1789-present

29 - Treaty Proclamations 1789-present

C.4 Before Current Data

These Source Record Groups contain documents prior to our window of study.

- 05 - White House Records 1869-present
- 08 - Manuscript collections 1790-1929
- 12 - Treasury and Justice Dept Records 1789-1908
- 15 - Printed Annual Agency Reports 1910-1914
- 17 - Navy and War Dept Records 1789-1884
- 20 - Messages and Papers of the President 1789-1899
- 25 - Official Bulletin 1917-1919
- 34 - Proclamations Relating to Public Lands 1813-1892
- 35 - Proclamations Relating to Public Lands 1834-1907
- 36 - Proclamations of Land Sales 1807-1886
- 37 - Abandoned Military Lands 1826-1905
- 38 - Executive Orders Relating to Indian Reservations 1850-1892
- 39 - Lighthouse Land Reservations 1837-1888
- 41 - Executive Orders Relating to Public Lands 1820-1913
- 43 - Abandoned Non-Military Land Reservations 1839-1901
- 55 - Navy Dept General Orders and Court-Martial Orders 1862-1920

C.5 Removed

We remove two categories of documents: those which do not have effectual policy significance, and those which are merely administrative actions (“Records”).

- 26 - Press Releases 1953-1955
- 44 - Presidential Pardons 1793-1935
- 48 - Pardon Attorney Records 1919-1924
- 51 - Codes of Fair Competition 1933-1935
- 57 - Statements of Administration Policy
- 58 - Weekly Compilation of Presidential Documents 1965-present

Records

The Records category consists of internal executive agency documents. We do not include them in our analysis.

13 - Independent Agencies Records 1917-1954

14 - Indian Agencies Records 1794-1937

24 - Treasury Dept Circulars 1859-1940

46 - Interior Department Records 1849 - 1938

47 - Water and Power Site Land Reservations 1909-1944

54 - War Department General Orders and Bulletins 1826 - 1954