

# The Unilateral Presidency, 1933–2017 <sup>\*</sup>

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## Abstract

Unilateral action is a defining characteristic of the modern presidency. Existing scholarship on unilateral action, however, has important empirical and theoretical limitations. Empirically, though scholars recognize the range of unilateral tools presidents may deploy, including executive orders, memoranda, proclamations, and other directives, these tools are generally considered in isolation and researchers focus most often solely on executive orders. Moreover, existing approaches provide no basis for comparing the substantive significance of unilateral action across directives and over time. Theoretically, scholars have focused on inter-institutional conflict as a constraint on unilateral power but have mostly neglected the role of public opinion. In this paper, we address both limitations and use new data and text analysis to characterize the significance of unilateral directives issued between 1933 and 2017. We present new findings about patterns of unilateral action over the last 85 years and show that public opinion may constrain presidents' exercise of unilateral powers.

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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 very 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 (1999*a*, 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) which amounts to "Madison's nightmare" (Shane 2009).

To date, however, political scientists have been more equivocal about the contribution of unilateral action to modern presidential power. The vast majority of empirical evidence indicates that presidents' use of unilateral action is strongly constrained by Congress, with presidents making decreased use of unilateral powers 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 the threat of congressional retaliation reduces the likelihood that a president will create a new policy via unilateral action in the face of congressional opposition. Overall, this research largely dampens concerns that unilateral powers threaten the separation of powers or the nation's constitutional order.

In this paper, we make new theoretical and empirical contributions to scholarship on unilat-

eral action and the presidency. First, we argue that political scientists have overestimated the strength of legislative checks on unilateral powers in the modern era. Small legislative majorities combined with increased partisan polarization significantly reduce Congress's ability to constrain the unilateral ambitions of contemporary presidents. Second, while scholars commonly recognize the significance of public opinion for the incentives offered to modern presidents, scholarship on unilateral action has largely overlooked the relationship between public opinion and uses of unilateral powers. We argue that unilateral powers provide tools through which presidents can respond to public opinion such that presidents make greater use of unilateral powers when their policy goals are aligned with public attitudes. Third, virtually all empirical research on presidents' use of unilateral powers focuses almost exclusively on executive orders but ignores the other tools — including memoranda, proclamations, and the like — through which presidents can effect policy change without congressional involvement, and provides little guidance about how to identify substantively significant instances of unilateral action across these various tools. We introduce new data on presidents' use of unilateral powers across multiple tools in the modern era and evaluate their policy significance.

We provide striking new evidence of unilateral action's contributions to modern presidential power. We use text analysis and machine learning techniques to classify the substantive significance of every unilateral action taken by presidents between 1933 and 2017. Descriptively, our data show that the number of significant unilateral actions have steadily increased over the last six decades, with this pattern explained largely by relatively dramatic increases in presidents' uses of memoranda. Incorporating the full range of substantively significant unilateral actions, we find no evidence that interbranch conflict between presidents and Congress — measured by the incidence of divided government — constrains presidents' use of unilateral powers; some evidence, in fact, suggests that divided government is associated with increased unilateral actions. Instead, we present preliminary evidence that patterns of unilateral action respond to public opinion, with presidents making greater use of unilateral powers when their policy preferences

are aligned with the president's. Altogether, our findings suggest that unilateral powers are a greater contributor to modern presidential power than commonly acknowledged and may serve as important tools of democratic responsiveness. Our results further demonstrate the utility of machine learning techniques for studying key questions related to the presidency and political institutions more generally.

## **Strategic Influences on the Use of Unilateral Action**

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 pointed 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.

A key question concerns whether unilateral powers enable the president to create new policies while circumventing an ideologically-hostile Congress. Consistent with what scholars have

termed the “evasion hypothesis” (Martin 1999), the “strategic model” (Deering and Maltzman 1999), or the “strong form” of unilateral action (Mayer 2009), much conventional wisdom suggests that presidents use unilateral action to implement policies with which Congress disagrees. By issuing directives such as executive orders 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. From a normative perspective, the evasion hypothesis suggests that unilateral action imperils the separation of powers by allowing a single individual – the president – to impose his preferred policies outside the constitutionally-prescribed lawmaking process. 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).

An alternative perspective on unilateral power emphasizes institutional constraints on a president’s use of unilateral power and provides somewhat more sanguine views about the implications of unilateral action for the separation of powers.<sup>1</sup> As Howell (2003, 70) describes it, the evasion hypothesis “ignores the constraining effect of Congress.” This alternative perspective emphasizes how 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

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<sup>1</sup>In 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 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.

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 if Congress threatens to reverse the president's actions.<sup>2</sup>

Scholars disagree, however, in their assessment of the degree to which the threat of congressional reversal reduces presidents' use of unilateral powers. Because "the veto-filled process of generating legislation remains incredibly difficult and costly," Moe and Howell (1999*a*, 146) argue from one end of the spectrum that "Congress is unlikely to reverse" presidential actions that shift the status quo unilaterally. Other formalized theories of unilateral action suggest that congressional opposition poses more substantial obstacles to presidents seeking to create new policies on their own. For instance, Howell's (2003) model predicts that presidents issue fewer unilateral actions when Congress is controlled by the opposition party due to the threat of reversal, even though presidents may want to make greater use of their unilateral powers under these circumstances. Bolton and Thrower (2016) modify Howell's theory by arguing that party control of Congress can constrain presidential unilateralism when congressional capacity is high but not when it is low. Finally, anchoring the other end of the spectrum, Chiou and Rothenberg (2014, 2017) posit that congressional constraints on unilateral powers are even stronger than acknowledged by others, arguing that presidents do not issue unilateral directives "without tacit approval by congressional majority parties" (Chiou and Rothenberg 2014, 655).

Arbitrating between the various perspectives offered above has important theoretical implications for characterizing the contribution of unilateral action to presidential power. It also has important normative implications for evaluating the breadth of presidential influence in the separation of powers system. If presidents routinely exercise unilateral powers in ways that are re-

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<sup>2</sup>This scholarship, particularly Howell (2003), also studies the potential for courts to overturn a president's unilateral action, while others consider potential bureaucratic obstacles to unilateral action (Kennedy 2015; Rudalevige 2012, 2015). In this paper, we focus on legislative constraints on unilateral action but our empirical approach could also be used to study judicial reactions to unilateral actions. 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).

sponsive to pivotal legislators, as Chiou and Rothenberg (2014, 2017) argue, on its face unilateral action seems to pose little threat to the Madisonian system. If, however, presidents regularly make use of unilateral powers to achieve significant policy goals they could not otherwise achieve and in the face of an oppositional Congress, unilateral action may indeed have expanded presidential influence at Congress's expense. Debates over these very issues have come to the fore in recent presidential administrations, with congressional critics of the presidential often characterizing unilateral action as a usurpation of legislative authority.<sup>3</sup>

The empirical evidence on presidents' use of unilateral powers, however, presents a far more unified characterization of congressional constraints than the theoretical perspectives outlined above. In contrast with the intuition captured by the evasion hypothesis, virtually all empirical scholarship shows either that party control of Congress makes no difference for presidents' use of unilateral actions or, more damning still for the evasion hypothesis, that presidents make greater use of unilateral powers during periods of unified government (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). In contrast with concerns about presidential imperialism, the best available evidence strongly suggests that institutional constraints loom large in presidents' unilateral calculations.<sup>4</sup>

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<sup>3</sup>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](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](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>.

<sup>4</sup>Scholars 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 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).

## Empirical and Theoretical Advances in Studying Unilateral Power

We identify three key empirical and theoretical limitations of existing scholarship on unilateral power. First, existing scholarship provides a consistently incomplete characterization of presidents' use of unilateral action. 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.<sup>5</sup> 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.<sup>6</sup> 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.

Second, from a theoretical perspective, we argue that while presidents may indeed make calculations about the likelihood of legislative reversal when contemplating unilateral action, ex-

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<sup>5</sup>Several 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.

<sup>6</sup>Executive 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."



isting 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), Congress confronts key disadvantages in developing a response to unilateral action due to the collective action problems that make it difficult for members of Congress to reach agreement and to do so in a prompt manner. 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 further 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 indeed grown during the postwar era (Bolton and Thrower 2016), so too has the president's 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.<sup>7</sup> 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 potential legislative constraints on unilateral action.

Third, we further argue that scholarship has largely overlooked how presidents' unilateral decisions respond to public opinion.<sup>8</sup> While researchers have included presidential approval 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. 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

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<sup>7</sup>These data were obtained from <https://www.whitehouse.gov/wp-content/uploads/2018/02/hist04z1-fy2019.xlsx>.

<sup>8</sup>To our knowledge, only one paper – Rottinghaus and Warber (2015) – focuses specifically on public opinion and presidents' use of unilateral powers.

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, 336) but does not directly investigate that claim. Presidents are responsive to public opinion in many other contexts, including when they announce public agendas (Cohen 1997), take 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 otherwise scale back their exercise of unilateral powers as the president and the public have divergent policy preferences. 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 in the absence of the strength of institutional constraints.

We address the empirical limitations of existing research described above while testing two main sets of expectations about patterns of unilateral action. After introducing new measures of unilateral activity, we evaluate how the presence of interbranch conflict is associated with presidents’ use of unilateral powers. If the potential for congressional reversal deters presidents from relying on unilateral powers, as much existing scholarship argues, we expect a negative relationship between unilateral action and divided government. But if these constraints are countervailed by Congress’s own internal constraints and/or the president’s capacity to carefully gauge opportunities for unilateral power, as we argued, this relationship will be null or positive. In our second set of tests, we examine whether presidents issue unilateral actions in patterns that are responsive to prevailing public opinion.

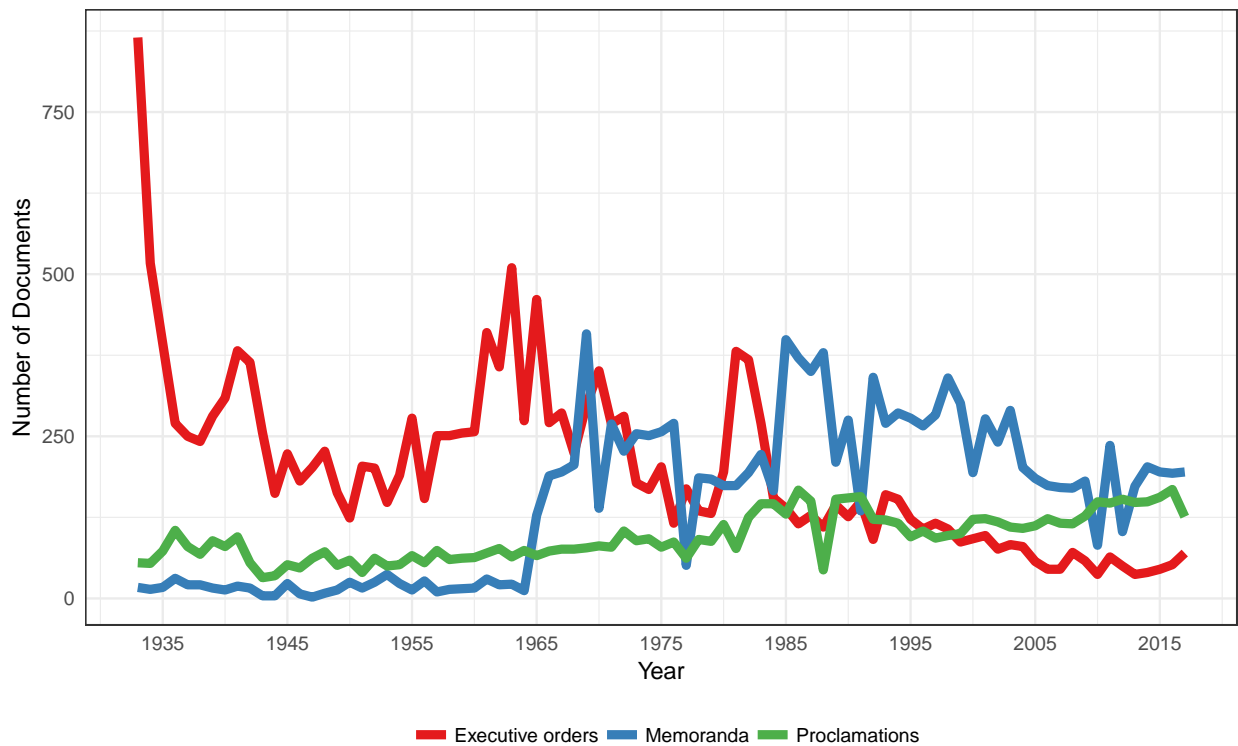
## Data and Empirical Strategy

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, of which 53,166 date from 1933 or later. 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. There are 52,297 documents in our three categories of relevant SRGs; of those, 37,681 date from 1933 or later.

Figure 1 shows the number of documents in each category from 1933 through 2017. 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.



**Figure 1:** The annual number of documents by category from 1933 to 2017. The documents fall into three categories: Executive Orders; Proclamations; and Memoranda.

## 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 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. 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.

Having collected the text of presidential unilateral directives issued between 1933 and 2017, we aim to estimate the significance of each document. We turn to the rapidly growing field of

Text as Data to do so (Grimmer and Stewart 2013). Text as Data may be either unsupervised (e.g., Grimmer 2009; Spirling 2012; Roberts et al. 2014) or supervised (e.g., Colleoni, Rozza, and Arvidsson 2014; Gentzkow and Shapiro 2010; Hopkins and King 2010; Thomas, Pang, and Lee 2006). Unsupervised learning uses tools such as topic models, clustering, and factor analysis to search for distinctive clusters of texts using only the words and without labels. Supervised learning, however, 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.

We follow a standard methodological procedure in the Text as Data literature to perform supervised learning consisting of five 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, and (5) use the model to predict the labels for out-of-sample documents, which are the ultimate quantity of interest. 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 members<sup>9</sup> to the Committee on the National Medal of Science (Document 1967-53-24).

**Document Labeling.** Of these documents, we identify the numbered executive orders from 1933 to 2017. Then, we match executive order significance estimates from Chiou and Rothenberg (2014) to their corresponding executive order text. This subset of the documents matched to their significance estimates constitutes the Training Set; the remaining documents without significance estimates constitute our Test Set.

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<sup>9</sup>These members were James Shannon, Harry Hess, Max Peters, and John Edsall.

**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. 2017). 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 forests (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), and ordinary least squares. We find that random forests perform best, as this procedure successfully identifies significant documents 75% of the time, with little observable heterogeneity across significance levels. 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.

Our model appears to perform well in distinguishing unilateral directives on the basis on their significance. As with the Chiou and Rothenberg (2014) estimates, President Kennedy's executive order to establish the President's Committee on Equal Employment Opportunities is estimated to be the most significant in our data. Among the executive orders that were not included as part of the training set, our model identifies Executive Orders 13581 and 13694 as the most significant, with significance estimates of 1.36 and 1.39, respectively. Among the executive orders that were not included as part of the training set, our model identifies Executive Orders 13581 and 13694 as the most significant, with significance estimates of 1.36 and 1.39. Both were issued by President Obama and received considerable political attention at the time of their issuance. Executive Order 13581, issued in 2011, imposed economic sanctions against transnational crime organizations and allowed the U.S. to freeze the assets of these groups and associated individuals. Executive Order 13694 was issued in 2015 and declared that the "prevalence and severity of malicious cyber-enabled activities" constituted a national emergency and made provisions for the U.S. to retaliate against individuals or states suspected of them. By comparison, the model identifies several recent executive orders as substantially less significant. Executive Order 13427, issued by President Bush in 2007, extended diplomatic privileges to the Permanent Observer Mission of the Holy See and has a significance estimate of -0.46. Similarly, President Obama's Executive Order 13697, which amended the criteria for designating Presidential Scholars, has a significance estimate of -0.40.

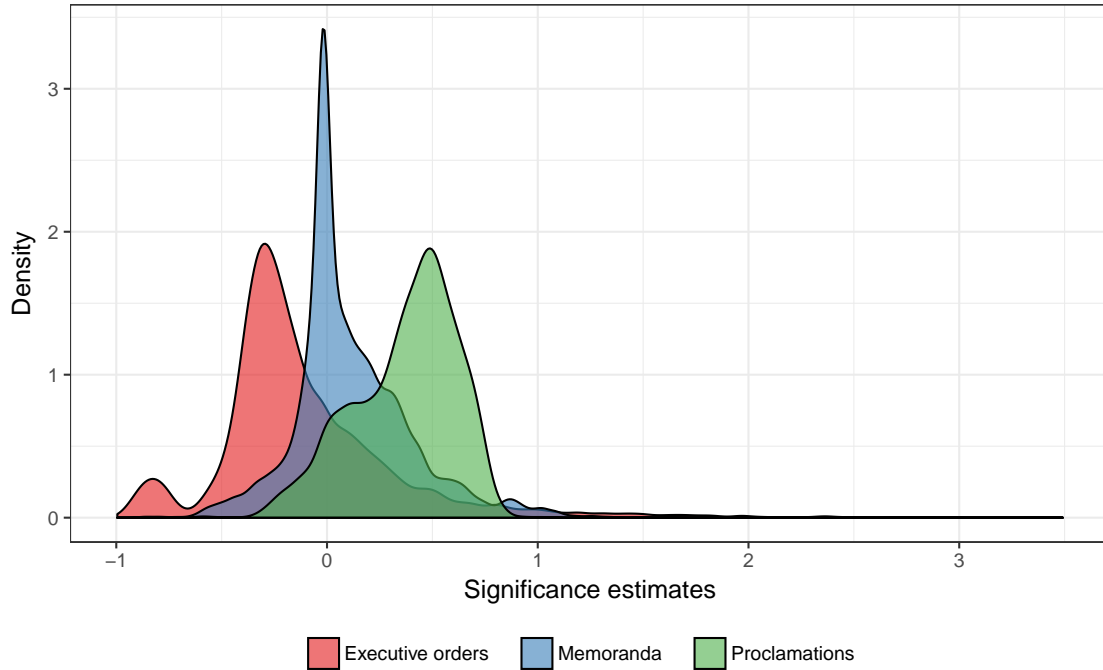
Our estimates also distinguish the policy significance of other unilateral directives. For in-



stance, a memorandum issued by President Clinton in 2000 related to the Equal Employment Opportunity Commission was designed to “ensure that important civil rights of civilian employees of the Department of Defense are protected.” This action is estimated to be the most significant memorandum in the time period under study with a significance estimate of 1.85. As noted above, proclamations generally have lower significance estimates than the other documents. President Trump’s Proclamation 9682, however, which reduced the size of protected lands as part of Grand Staircase-Escalante National Monuments in Utah, has a significance estimate of 0.84, which is among the most significant proclamations in the data. Many other directives, in contrast, have lower scores and generally do not appear to address substantive policy issues. For example, Proclamation 9632, issued by President Trump, designated September 2017 as National Preparedness Month to “bring attention to the importance of readying ourselves for disasters” and “extend our sincerest gratitude to first responders.” Our analysis identifies this proclamation as among the least significant in the data with a significance score of -0.32.

Figure 2 below shows the distribution of the significance scores for each document type from 1945 to 2013. Several important features stand out. First, by construction based on our use of significance scores from Chiou and Rothenberg (2014), estimates range from -0.995 to 3.491. Second, interestingly, the average document from our set of Memoranda and Proclamations is estimated to be more significant than the average executive order, and each of these differences is statistically significant ( $p < .001$ ). Third, and perhaps most importantly, Executive Orders have a much longer right tail than the other document types, which suggests that the most significant executive orders have much greater policy consequence than relatively important versions of the other unilateral tools.

Using the significance scores shown in Figure 2, we distinguish significant unilateral actions as those whose scores are greater than zero. While this threshold is admittedly arbitrary, as any threshold would be, the content of these actions suggests that documents with estimated scores larger than zero meaningfully distinguishes policies of greater consequence than documents with



**Figure 2:** The distribution of document significance by category from 1933 to 2017.

negative significance estimates. We point out that our scores are measured with error and thus we do not interpret them in a cardinal way. In our analyses below, moreover, we explore the robustness of our findings across varying thresholds used to distinguish significant unilateral actions.

## Feature Importance

As a face validity check on our model, we perform a 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.

If our model performs as we intend, we expect that the most important features it identifies will be ones which clearly discriminate significant orders from ceremonial ones. We calculate feature importance for random forests model and present the 20 most important terms below in columns 1 and 2 of Table 1, then 20 largely insignificant terms in columns 3 and 4. 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.

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.

## **Model Accuracy**

Our approach using machine coding has two key advantages over human coders: 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 take months or years to do the same. Despite these advantages, machine coding may be less desirable if it is less accurate than human coders. We assess accuracy through two means. The first is through cross-validation as described above. The second is through comparisons to human coders.

**Table 1:** Feature Importance in Presidential Documents

Important Term	Importance	Unimportant Term	Importance
polic	53.642	red	0.032
shall	40.587	suprem	0.032
direct	30.221	receipt	0.032
agenc	20.072	northeast	0.032
law	18.772	room	0.032
necessari	18.732	1934	0.031
threat	16.659	ever	0.031
take	15.549	hope	0.031
report	15.096	began	0.031
enforc	13.919	count	0.031
permit	12.636	singl	0.031
establish	12.474	feb	0.030
nation	10.761	recit	0.030
board	10.575	resign	0.030
includ	10.451	counter	0.030
creat	10.343	undertak	0.030
act	9.741	led	0.029
person	9.489	roll	0.029
engag	9.184	repair	0.029
amend	8.810	ous	0.029

Cross-validation 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. If there were no relationship between our model’s predictions and the training documents’ significance as measured by Chiou and Rothenberg, we would expect a correlation of 0. In practice, we observe a correlation of 0.564.<sup>10</sup>

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 the significance of various

<sup>10</sup>These comparisons are shown in Figure B.1.

unilateral actions and compared those human coders' accuracy to that of our model. We presented the research assistants with 100 executive orders 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. Instead, the three pairwise correlations (0.530, 0.375, and 0.360) provide evidence of low intercoder reliability.

In the second analysis, we correlated the three sets of hand-coded significance scores with Chiou and Rothenberg's scores for the same documents. We find that the research assistants' scores correlated with Chiou and Rothenberg's scores at 0.468, 0.428, and 0.417, 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 scores and correlate that vector to the Chiou and Rothenberg scores. That correlation is 0.565, which is virtually identical to the correlation between our model's predictions and Chiou and Rothenberg's estimates. However, we note that averaging any two sets of hand-codes produces results substantially weaker results: to measure the significance of all unilateral actions using undergraduates at the same accuracy level as our model would require hand-coding all nearly 100,000 documents in triplicate. In sum, these exercises suggest that our machine learning model performs at least as well as trained undergraduate research assistants and provides a dramatic improvement as a scalable approach for measuring document significance.

## **Robustness Checks**

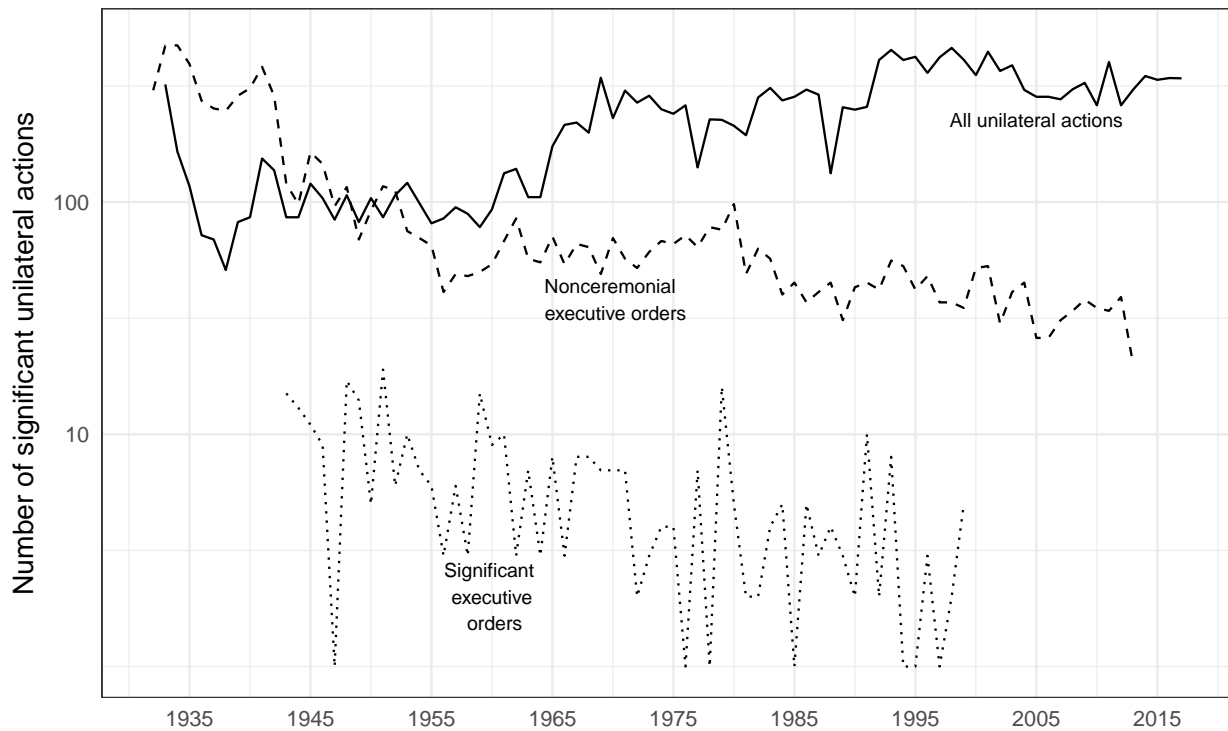
Despite encouraging results for our model’s internal and external validity, we acknowledge several potential threats to our model’s applicability. These threats relate, respectively, to changes in language over time, the rarity in our data of highly significant documents, and heteroskedastic prediction accuracy. We detail these threats, and provide a suite of robustness checks to them, in Appendix A. To address concerns related to the changes in language over time, we introduce a hand-verified matching procedure by which we expand our training data by approximately 10%, and show that this procedure improves our key measures of external validity.

## **Patterns in Significant Unilateral Action, 1933–2017**

Based on the criterion we have adopted for distinguishing unilateral actions with policy significance, the solid line in Figure 3 shows the annual distribution of significant unilateral actions from 1933 to 2017. 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. From 1938, in which the fewest (51) significant unilateral actions were issued, the use of unilateral powers gradually increased and reached a peak of 461 in 1998. However, the dawn of the twenty-first century may have been an inflection point, as neither George W. Bush nor Barack Obama issued as many significant executive actions as Bill Clinton. Instead, the use of unilateral tools may have somewhat leveled off, though as Lowande (2014) argues, recent presidents may alter the ways they employ various unilateral tools to create new unilateral policies.

The dashed and dotted lines show the patterns of significant unilateral activity when using other commonly-used measures of significant unilateral action. The dashed line shows the number of nonceremonial executive orders issued by presidents and reported in Bolton and Thrower (2016). Interestingly, these data show that presidents made decreased use of nonceremonial exec-

utive orders over the second half of the twentieth century just as our estimates show an increase in unilateral activity. The dotted line shows the number of significant executive orders identified by Howell (2003). Here, too, we find that the use of these actions was highly variable from year to year, but these data do not capture the overall aggregate increase in unilateral activity revealed by our focus on other unilateral directives in addition to executive orders. Our data thus provide new descriptive information about trends in presidents' use of unilateral powers.



**Figure 3:** Annual number of significant unilateral actions, 1933 to 2017. 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).

The plots shown in Figure 4 display the distribution of significance estimates and how they characterize the various tools of unilateral action. Figure 4a shows the number of documents classified at varying levels of significance. Across all the documents in the data, 49% of them have

significance estimates smaller than zero, indicating that the plurality of unilateral actions concern mostly routine, administrative, and/or symbolic tasks. However, the distribution of significance also varies significantly across year. For instance, in 1938, the year in which the fewest unilateral actions were issued during the time period under study, about 15% of the directives issued by Roosevelt had significance scores greater than zero – the lowest rate in the last 85 years. In contrast, more than 90% of unilateral directives issued in 2010 had significance ratings greater than zero. Of the documents with scores greater than zero, about 18% had significance ratings greater than 0.5 and just fewer than two percent had significance ratings greater than one. On the whole, therefore, our analysis suggests that highly significant unilateral actions are relatively infrequent.

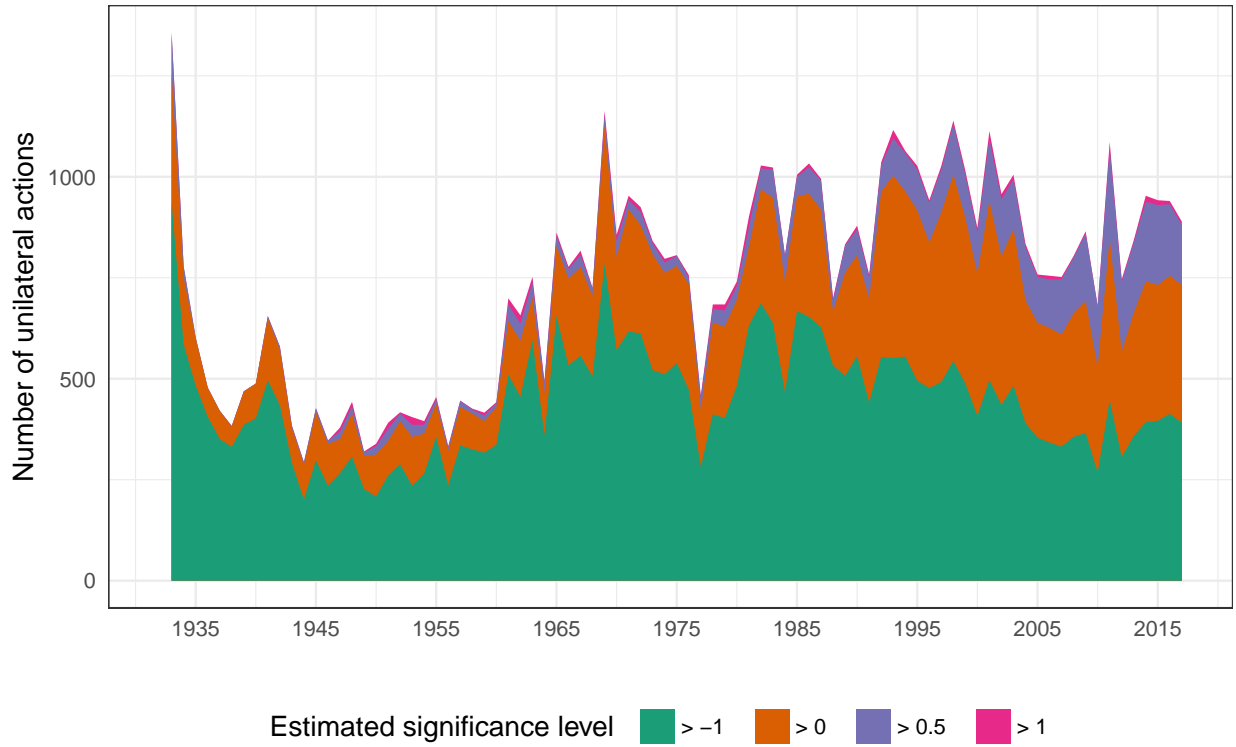
Figure 4b shows how the distribution of significance varies across various unilateral tools. Between 1933 and 2017, executive orders comprised 25% of significant unilateral actions, while memoranda and proclamations accounted for 38 and 37 percent, respectively. These aggregate statistics obscure substantial variation across time, however. In the recent period, executive orders account for far smaller percentages of significant unilateral actions. Before 1950, executive orders comprised more than half (51%) of all significant unilateral actions. Since 2000, however, only 16% of significant unilateral actions were issued as executive orders. While there is some variation from year to year, proclamations have generally constituted a relatively stable share of significant executive action; for instance, 41% of significant unilateral actions issued prior to 1950 were proclamations, while 38% of significant executive actions since 2000 have been proclamations. Consistent with Lowande (2014), we find that presidents have made significantly greater use of memoranda as means for issuing significant unilateral actions. Before 1950, for instance, memoranda comprised only 8% of significant unilateral actions; since 2000, 46% of significant unilateral actions have been issued as memoranda.

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



**Figure 4: Significant Unilateral Action, 1933–2017**

**(a) Distribution of document significance**



**(b) Distribution of significance across document type**

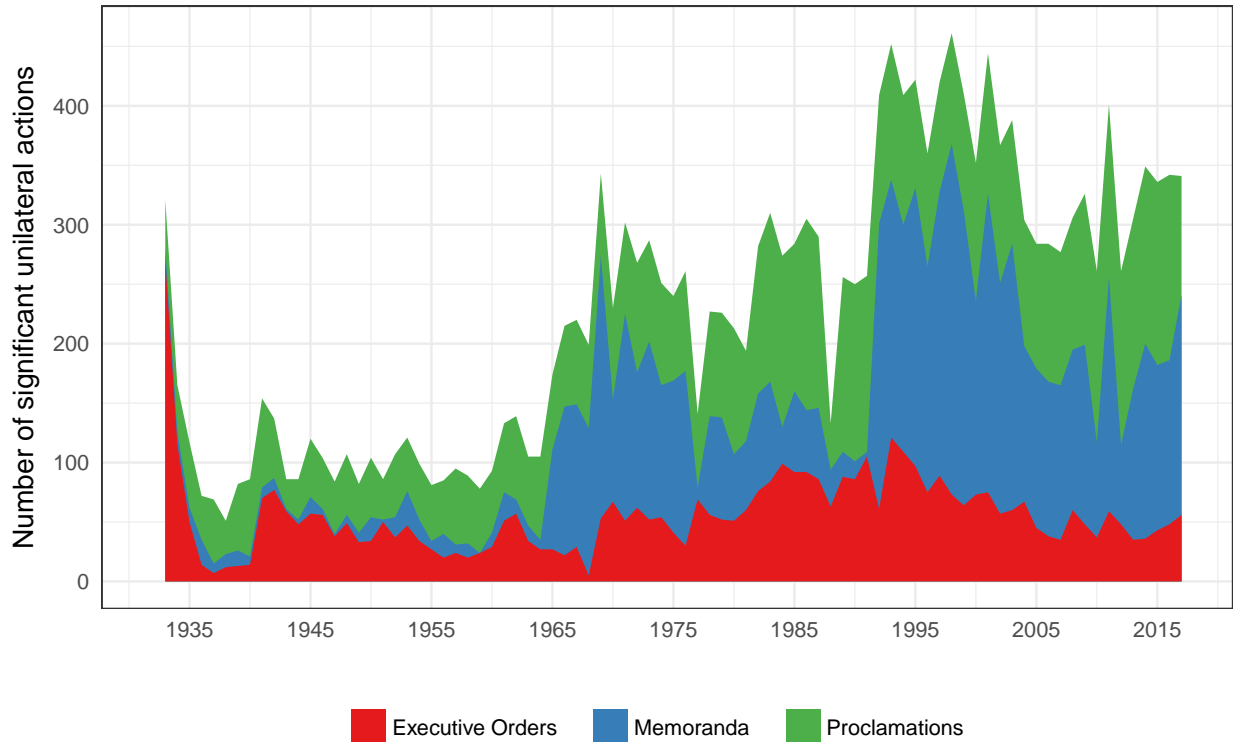


Figure 4a shows the number of documents classified at varying significance levels, where more positive estimates include directives with greater levels of substantive significance. Figure 4b shows the distribution of significance across document type.

investigate theoretical accounts of unilateral power and study the incentives and constraints that affect its use.

## Explaining Presidents' Use of Unilateral Powers

We adopt modeling strategies from existing literature to study the theoretical factors that influence the use of unilateral actions. The dependent variable in our analysis is the number of significant unilateral actions issued by a president in a given year. Our primary independent variable characterizes how interbranch conflict influences a president's use of unilateral policy-making. Following prior research on Congress's capacity to constrain a president's unilateral ambitions (Bolton and Thrower 2016; Howell 2003), we study whether presidents issue fewer executive orders when different political parties control the White House and Capitol Hill. Accordingly, we include an indicator, *Divided Government*, which distinguishes years in which a majority of legislators in at least one chamber of Congress are from the party opposite the president's. If the threat of congressional retaliation constrains presidents from exercising unilateral powers to advance their policy interests, we expect a negative coefficient on this variable.

Second, we estimate models where we account for the degree of congressional fragmentation. As legislators' preferences are more widely dispersed, Congress has a more difficult time acting collectively to retaliate against a president for exercising unilateral powers against its wishes (Howell 2003). 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 corresponds with Congress's decreased ability to respond to a president's unilateral acts.

We also estimate models which account for a variety of other factors that theory or previous findings suggest may relate to the volume of unilateral action. First, we include an indicator, *Administration change*, for new presidential administrations that represent a change in the pres-

ident'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. Second, we account for economic factors which may create incentives for presidents to issue unilateral actions by including variables for the *Inflation rate* and *Spending* as a percentage of gross domestic product. Third, we include indicators for years the country is involved in major *War*, during which periods presidents may issue more unilateral actions to direct military efforts.<sup>11</sup> Fourth, we include a variable, *Trend*, which accounts for any secular trends in the incentives for unilateral power. Finally, in our fully specified models we include fixed effects for each president to control for differences in the rate at which individual presidents have issued unilateral actions. 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 instances of divided or unified government, 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 president fixed effects account for potential president-specific confounders, their inclusion places considerable demands on the data by estimating the within-president coefficients for each of the covariates. Thus, we estimate a series of models to study our main relationships of interest and seek to identify similarities across them.

## Results

Table 2 displays our main findings when estimating various model specifications that regress the total number of significant unilateral actions on the variables described above. In our simple bivariate model shown in column (1), our findings show that divided government is associated

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<sup>11</sup>Following (Bolton and Thrower 2016), periods of war correspond to the years 1941 through 1945, 1951-1953, 1964-1973, 1991, and 2001-2003. We have estimated additional models which extend the designation of war through the end of the W. Bush and Obama presidencies and find that our results are robust to these coding decisions.

with a significant *increase* in the number of unilateral actions issued by presidents and contrast with a large literature that emphasizes the importance of legislative constraints on presidential action. This result persists in model (2), which includes a wide range of control variables discussed above along with an indicator for Democratic presidents. Our findings imply that presidents issue an average of 211 unilateral actions under unified government and 243 under divided government, which corresponds to a 16% increase in unilateral activity during divided government. In column (3), we include the full battery of president fixed effects. While the coefficient for *Divided government* remains positively signed, it falls short of statistical significance ( $p < .14$ ). In contrast with theoretical and empirical scholarship which emphasizes the strength of legislative constraints on unilateral action, however, we find no evidence across these models that interbranch conflict is associated with decreases in unilateral activity. To the contrary, some of our models provide evidence in support of the evasion hypothesis and suggests that presidents make *greater* use of unilateral powers during divided government.

We find little systematic evidence of relationships between unilateral action and our other covariates. The coefficient for *Gridlock* is positive in both columns (2) and (3), indicating that presidents issue more unilateral actions when Congress is internally divided, but this coefficient is only positive in model (2). The coefficients for *Administration change*, *Inflation*, and *Spending* are all statistically indistinguishable from zero. *War* is associated with a statistically significant increase in unilateral action in model (2) but is not significant in model (3). Similarly, the results from model (2) indicate that *Lame duck* presidents issue significantly fewer unilateral actions but the coefficient estimate is very small in magnitude and not statistically significant in model (3). Models (2) and (3) also produce divergent findings with respect to secular trends. In model (2), the coefficient indicates that presidents have issued greater numbers of unilateral actions across time, which is consistent with the descriptive patterns shown in Figure 3. In the within-president results (model 3), however, the findings suggest that presidents issue fewer unilateral actions over the course of their terms in office. Finally, our estimates of president fixed effects

(not displayed) are positive and statistically significant for each president beginning with Lyndon Johnson. Because Franklin D. Roosevelt is the omitted category, this indicates that presidents over the last half-century have made greater annual use of unilateral powers than Roosevelt, controlling for the other covariates.

**Table 2:** Presidents' Use of Unilateral Action, 1933–2017

	(1)	(2)	(3)
Divided government	0.409** (0.147)	0.145** (0.069)	0.086 (0.057)
Legislative gridlock		0.467** (0.166)	0.220 (0.135)
Administration change		0.273 (0.166)	0.142 (0.148)
Inflation rate (%)		-0.002 (0.013)	-0.014 (0.010)
Spending (% of GDP)		-0.007 (0.008)	-0.001 (0.005)
War		0.192** (0.079)	0.124 (0.099)
Lame duck president		-0.274** (0.116)	0.006 (0.124)
Trend		0.016** (0.004)	-0.022* (0.013)
Democratic president		0.115 (0.144)	
(Constant)	5.195** (0.169)	3.867** (0.324)	5.411** (0.451)
President fixed effects			✓
Log-likelihood	-514.65	-469.08	-440.47
Observations	85	85	85

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).

We estimated additional models to explore the robustness of the relationship between divided government and unilateral action. To do so, we re-estimated model (3) from Table 2, which produced the most conservative estimate of this relationship, across a wide range of values of the

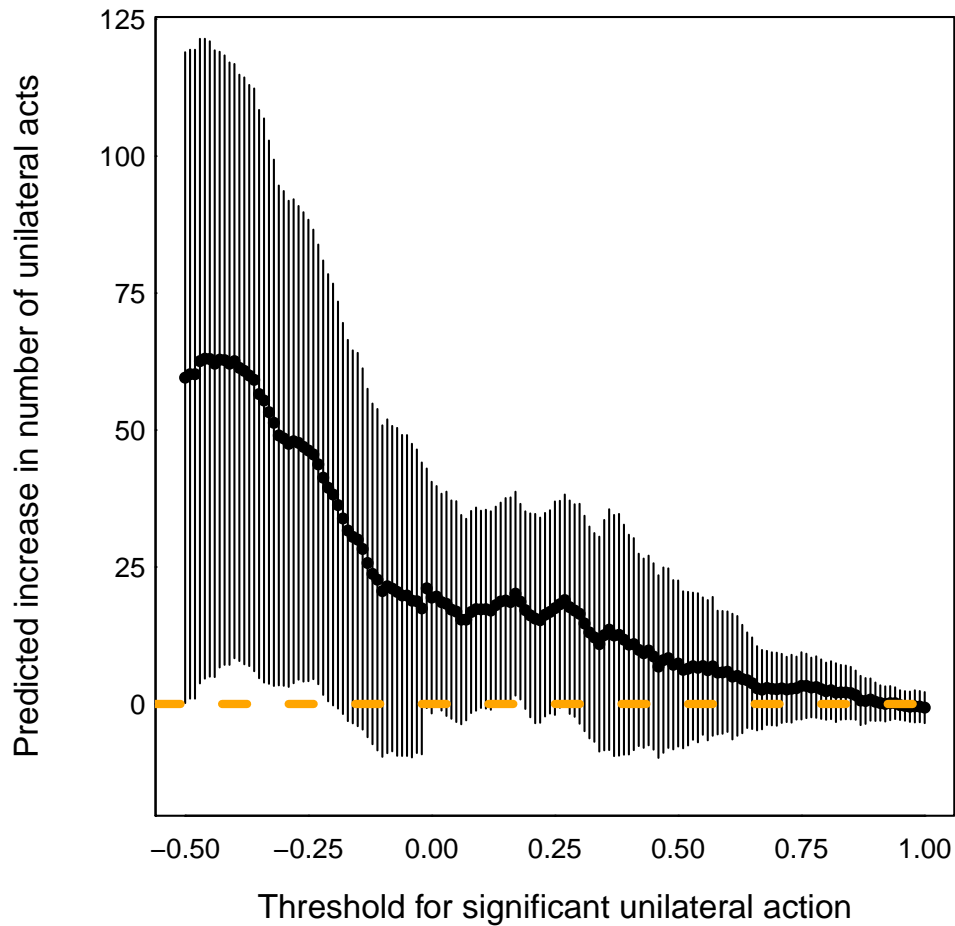
threshold used to identify significant unilateral actions. Specifically, we estimated the model by distinguishing unilateral actions as those whose significance scores were -0.50 or greater, and then re-estimated this model 151 times, each time increasing the threshold by 0.01. Based on each model's results, we compared the predicted number of unilateral actions under divided government and unified government.

Figure 5 displays the results of this exercise. The  $x$ -axis indicates the threshold used to identify significant unilateral actions and the  $y$ -axis shows the predicted increase in the number of unilateral actions for each threshold. The points indicate the predicted increases and the vertical lines show the 90% confidence intervals. The dashed horizontal line at zero indicates the null hypothesis of no relationship between interbranch conflict and unilateral action.

The patterns shown in Figure 5 provide strong reasons to doubt claims that presidents issue fewer unilateral actions during periods of divided government. Virtually every model provides a positive coefficient for *Divided government*, though a large proportion of these estimates are indistinguishable from zero. Conservatively, the findings indicate that there simply is no association between divided party control of government and presidential unilateralism. For lower thresholds of significance, moreover, the results indicate that presidents may in fact make greater use of unilateral powers during periods of divided government.

In additional analyses, shown in Table 3, we find no evidence that these patterns reflect variation in presidents' use of one unilateral tool over another during periods of divided government. The table reports results of models identical to those reported in column (3) of Table 2 but where the dependent variable is the number of significant (estimates  $> 0$ ) executive orders, memoranda, and proclamations, respectively. The coefficient estimate for *Divided government* is not statistically significant in any of the three models. We also find some differences in the relationship between unilateral tools and some of the other predictors. For instance, presidents appear to issue more executive orders as legislative gridlock increases and as government spending increases, but we do not find that gridlock or spending has significant relationships with memoranda or procla-

**Figure 5:** Divided Government and Unilateral Action across Significance Levels



Estimates based on model (4) of Table 2. The points show the predicted increase in significant unilateral action associated with divided government. The horizontal lines show the 90% confidence intervals associated with each estimate. Values along the  $x$ -axis indicate the threshold used to distinguish significant unilateral acts. Positive values along the  $y$ -axis indicate that divided government is associated with more unilateral action while negative values indicate that divided government is associated with fewer unilateral actions. The horizontal dashed line indicates the null hypothesis of no association between party government and unilateral action.

mations. Presidents also issue significantly greater numbers of proclamations during war, but the coefficients are not statistically significant (though both are positive) for memoranda or proclamations. The coefficient for *Administrator change* is positive but not statistically significant for executive orders or memoranda, but it is negative and statistically significant for proclamations. Finally, the time trend variable is negative and statistically significant for executive orders, indi-



cating that – as shown above – presidents issue fewer executive orders over their term in office. However, its coefficient is small in magnitude and not statistically distinguishable from zero for the other unilateral tools, indicating that significant memoranda and proclamations are issued at relatively constant rates over the course of a president’s time in office. Overall, the results in Table 3 provide some intriguing yet limited evidence that presidents may exercise unilateral powers in somewhat different ways across unilateral tools. For the most part, however, the broad similarities across each tool also suggest that they are each part of presidents’ larger unilateral strategies as their use responds to similar constraints and incentives.

## **Public Opinion and Presidential Action**

The results above provide little evidence that presidents scale back their unilateral ambitions when Congress is controlled by the opposite party. In our final set of analyses, we consider how presidents may exhibit responsiveness to public opinion through their use of unilateral powers. To do so, we use measures of the public mood developed by Stimson (1991).<sup>12</sup> This measure is available for the years 1952 to 2016 and describes “global preferences for a larger, more active federal government as opposed to a smaller, more passive one across the sphere of all domestic policy controversies” (Stimson, Mackuen, and Erikson 1995). 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 *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

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<sup>12</sup>These measures were obtained from <http://stimson.web.unc.edu/files/2017/08/Mood5216.xls>.

**Table 3:** Presidents' Use of Unilateral Action, 1933–2017: Variation across Tools

	Executive orders	Memoranda	Proclamations
Divided government	0.074 (0.131)	-0.081 (0.195)	0.008 (0.069)
Gridlock	0.687* (0.360)	0.083 (0.814)	-0.426 (0.376)
Inflation rate (%)	-0.008 (0.017)	-0.051 (0.037)	0.001 (0.011)
Spending (% of GDP)	0.010** (0.003)	-0.010 (0.015)	-0.012 (0.010)
War	0.260 (0.191)	0.104 (0.359)	0.080* (0.043)
Lame duck president	0.085 (0.220)	0.169 (0.194)	-0.132 (0.181)
Administration change	0.272 (0.261)	0.112 (0.310)	-0.159* (0.085)
Trend	-0.062** (0.018)	-0.023 (0.041)	0.003 (0.010)
(Constant)	5.623** (0.462)	3.238** (1.505)	4.028** (0.293)
President fixed effects	✓	✓	✓
Log-likelihood	-368.70	-391.22	-341.04
Observations	85	85	85

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).

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. Following 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.

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.

Table 4 reports results from models intended to test the above account. In the first column, we report results from model (3) from Table 2 with the inclusion of the *Public mood* variables. Interestingly, changes in the public mood within a president's term appears to have statistically significant implications for a president's use of unilateral powers. The negative coefficient indicates that presidents issue significantly fewer unilateral actions as the public mood grows more liberal within their term. The second column shows results from a model similar to model (2) in Table 2 where we substitute an indicator for presidential partisanship for president fixed effects. In this cross-sectional model, we find no relationship between public opinion and unilateral action, as the coefficient for *Public mood* is small in magnitude and statistically indistinguishable from zero.

In the third column, we interact *Public mood* with our indicator for Democratic presidents. The interaction term in this model implies that the coefficient for the *Public mood* constituent term reflects the estimate for Republican presidents. Indeed, we find that this coefficient is negatively signed and statistically significant. Republican presidents, our results imply, issue significantly fewer unilateral actions as the public mood is more liberal. This finding is consistent with

the account we presented above; when Republican presidents are confronted with a public that grows more opposed to the president's personal policy views, presidents issue considerably fewer unilateral actions. We find similar results for Democratic presidents. Democratic presidents are estimated to issue more unilateral actions than Republican presidents (though this coefficient is not statistically significant), and the difference between Democratic and Republican presidents increases as the public mood is more liberal. On the whole, these findings suggest that presidents make greater use of unilateral powers when their policy preferences are aligned with the public's.

**Table 4:** Public Mood and Unilateral Action, 1952–2016

	(1)	(2)	(3)
Public mood	−0.025** (0.010)	−0.009 (0.009)	−0.025** (0.009)
Democratic president		0.079 (0.117)	0.062 (0.109)
Public mood × Democratic president			0.029* (0.017)
Gridlock	0.188 (0.314)	0.384 (0.268)	0.181 (0.339)
Divided government	0.054 (0.063)	0.124** (0.042)	0.097* (0.050)
Inflation rate (%)	−0.034* (0.019)	0.015 (0.023)	0.016 (0.021)
Spending (% of GDP)	0.052** (0.026)	0.011 (0.030)	0.007 (0.025)
War	0.107 (0.133)	0.253** (0.107)	0.255** (0.095)
Lame duck president	−0.148 (0.128)	−0.280** (0.128)	−0.242* (0.127)
Administration change	0.045 (0.094)	0.076 (0.122)	−0.001 (0.142)
Trend	0.025 (0.016)	0.019** (0.003)	0.021** (0.003)
(Constant)	2.226* (1.258)	3.277** (0.792)	3.365** (0.696)
President fixed effects	✓		
Log-likelihood	−324.31	−356.59	−355.32
Observations	65	65	65

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 6 below displays the substantive relationship between public opinion and unilateral action.<sup>13</sup> Based on the estimates shown in column (3) of Table 4, the solid blue line shows the predicted number of unilateral actions for Democratic presidents across the range of values of *Public mood*. (All other variables are held at their mean or modal values.) The shaded area represents the 90% confidence intervals associated with these estimates and the tick marks along the *x*-axis indicate the observed values of *Public mood* from 1952 to 2016. With a Republican president in office, our estimates indicate that a shift from the minimum to maximum values of *Public mood* correspond with an decrease of about 39% in the number of unilateral actions, from 334 to 202. Democratic presidents, however, appear to issue more unilateral actions as their policy beliefs are increasingly aligned with the public's, though the evidence is weaker than it is for Republican presidents. Across the range of values of public mood, the predicted number of unilateral actions increases by about 8%, from 266 to 287.

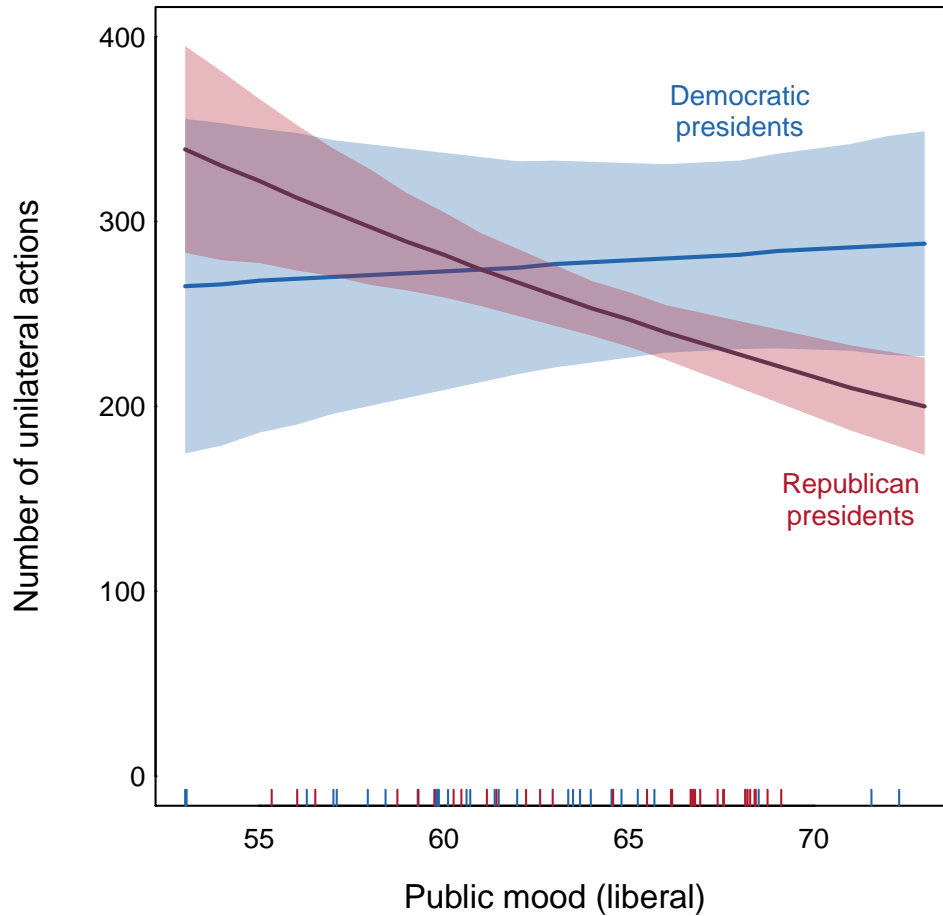
The results in this section provide some initial evidence about unilateral action's relationship with public opinion and political responsiveness. Presidents use unilateral powers at greater rates when their policy preferences are aligned with the public's, and they scale back their use of unilateral action as their views are increasingly out of step with the public mood. These findings provide suggestive evidence of how presidents may use unilateral powers as a means of responding to the extraordinarily expectations to which the public holds them. At the same time, the results suggest that presidents may be less willing to push the boundaries of unilateral power when confronted with a public that may respond disapprovingly to a president's use of power to achieve goals the public does not share. As such, public opinion may operate as a potential constraint on the exercise of unilateral power.

Though this interpretation is consistent with an important body of research that studies the connection between public opinion and presidential policymaking, it is necessarily speculative.

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<sup>13</sup>For readers who would prefer to view these results in terms of the marginal effect of a Democratic versus Republican president on the use of unilateral action, conditional on public mood, please see Figure B.2.

**Figure 6:** Unilateral Action and Public Mood, 1952–2016



Estimates based on model (3) of Table 3. The solid lines show the predicted number of unilateral actions issued by presidents across the range of values of *Public mood*. The shaded areas represent the 90% confidence intervals associated with these estimates. Republican presidents are shown in red and Democratic presidents are shown in blue. The tick marks along the *x*-axis illustrate the observed distribution of *Public mood* across Republican and Democratic administrations.

For one, it depends 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.

## 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.<sup>14</sup> 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 divided government – 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 argue that existing accounts overstate the importance of the threat of legislative reversal on presidents' use of unilateral action in the contemporary period. While presidents may indeed prefer not to issue unilateral actions that are destined to be undone by a disagreeable Congress, as these theories posit, partisan polarization substantially augments the collective action problems that hinder Congress's ability to respond to the president in the first place. We also argue that Congress is not the only relevant audience for presidents' use of unilateral powers; instead, presidents may also use them (or refrain from doing so) in ways that respond to public opinion. Moreover, we argue that 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

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<sup>14</sup>See, e.g., <https://www.nytimes.com/roomfordebate/2014/01/29/presidential-power-vs-congressional-inertia/presidents-cannot-ignore-laws-as-written>.



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. 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.

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 & Document Matching

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 may be very legalistic, while important memoranda or proclamations 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. 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 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 93.2% of our training set consists of Executive Orders, they account for less than half of the full 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 287 non-Executive Order documents and add them to the training set. We perform this duplication as many as five times and as few time as once, producing five alternate models.

To assess the improvement this procedure provides, we conduct a validation analysis. The same research assistants who hand-coded executive orders in Section hand-coded other documents as well. We correlate each of our model’s predictions to the significance estimates produced by the research assistants, and find that our matching and duplication procedures substantially improve the quality of our results.

Using the model trained only on executive orders, our predictions correlate with our undergraduate significance scores at 0.282. Using the model supplemented with matched data, our predictions correlate with our undergraduate significance scores at 0.488. Our models which duplicate the matched documents five times correlate at 0.496.<sup>15</sup>

### **The Rarity of Significant Documents**

A second challenge in estimating document significance is class imbalance: there are far more insignificant executive orders in our training set than there are significant executive orders. Less than 1% of executive orders in the training set qualify as highly significant. As a result, there may be insufficient training data to accurately identify highly significant documents in the test set.

We show that this concern is unfounded in our case. By considering only the binary question of whether a document is in the top 10% most significant documents, we can test whether the model is sufficiently sensitive to identify these rare cases. To do so, we coarsen both our predictions and Chiou and Rothenberg’s scores into whether the document is in the top 10% of significant documents, and calculate the “confusion matrix” – that is, the true positive, true negative, false positive, and false positive rates. If our model were predicting no better than random, we would expect to accurately identify 10% of the significant documents. We find that we can successfully identify 50% of significant documents. This gives us a cautious optimism about the model’s ability to perform well despite class imbalance.

### **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 measured with 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

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<sup>15</sup>Duplicating fewer than five times produced inferior results.

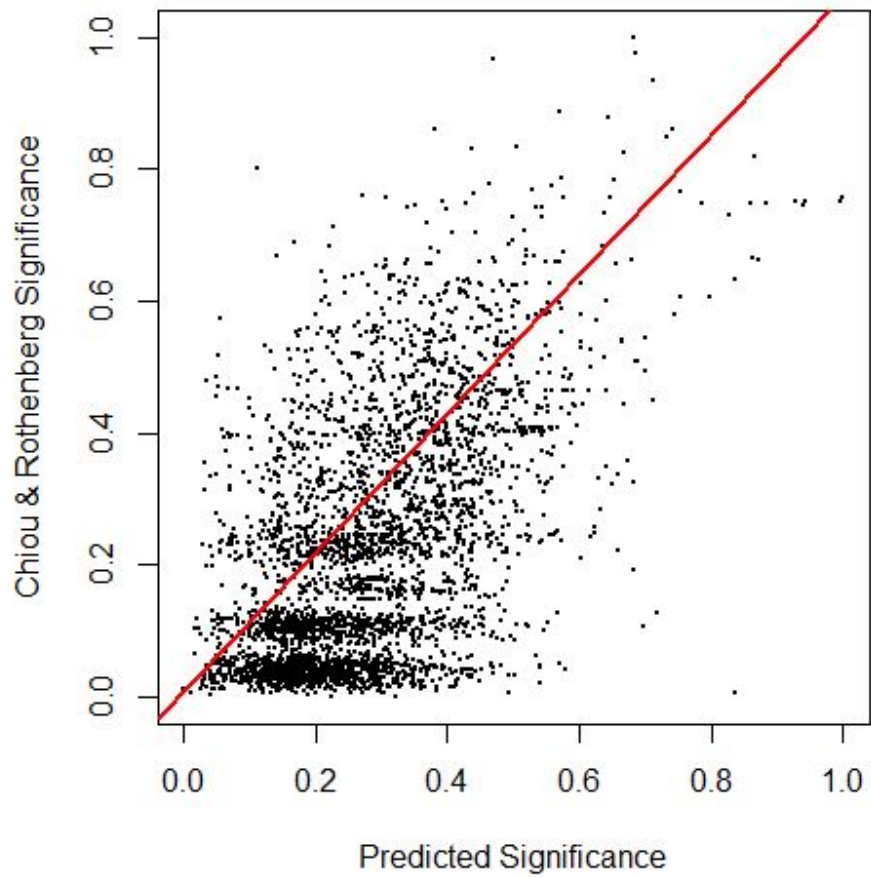
among the low-significance documents. Documents which Chiou and Rothenberg estimate to be of very low significance our model often overestimate as being moderately significant. This is critical for performing additional analysis, as any systematic bias in our model's accuracy would subsequently bias any regression results for which we use our model's predictions.

## B Supplementary Appendix: Additional Tables and Figures

**Table B.1:** Presidents' Use of Unilateral Action, 1952–2017

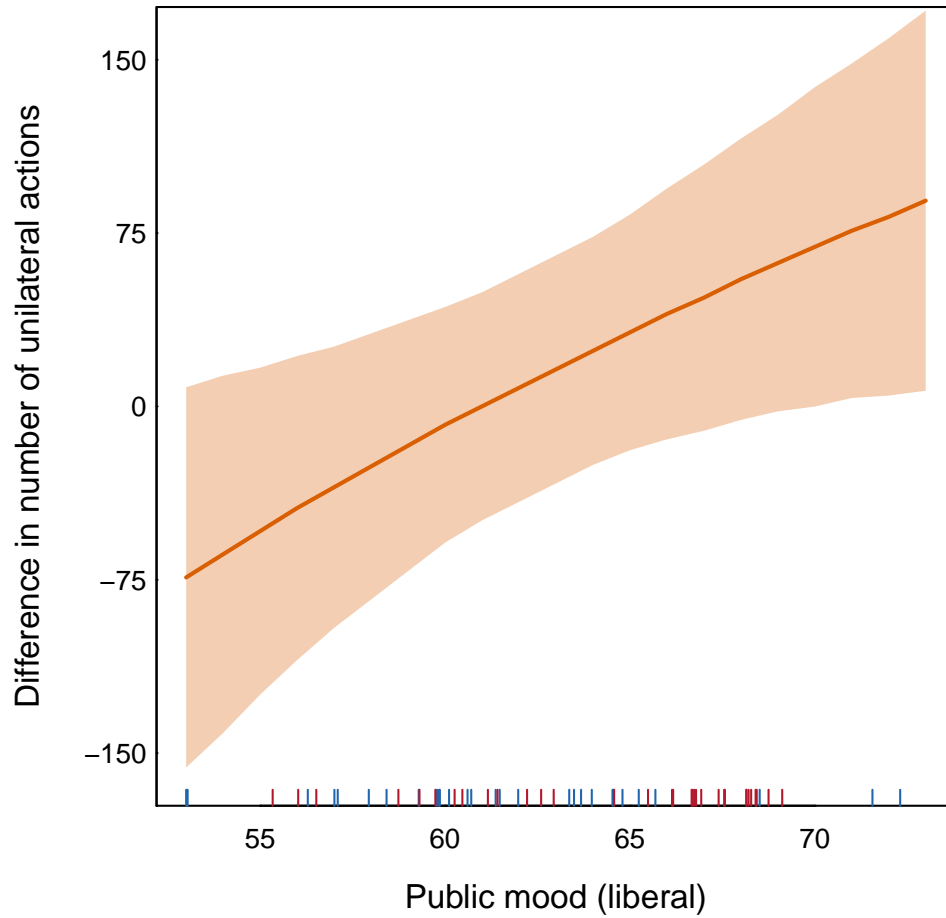
	(1)	(2)	(3)
Divided government	0.227** (0.112)	0.147** (0.061)	0.101 (0.071)
Inflation rate (%)		0.022 (0.017)	-0.017 (0.016)
Spending (% of GDP)		0.018 (0.034)	0.052 (0.035)
War		0.261** (0.111)	0.123 (0.139)
Lame duck president		-0.275** (0.131)	-0.141 (0.158)
Administration change		0.089 (0.123)	0.056 (0.103)
Trend		0.018** (0.003)	0.012 (0.015)
Legislative gridlock		0.449 (0.296)	0.228 (0.294)
Democratic president		0.120 (0.127)	
(Constant)	5.408** (0.148)	3.085** (0.844)	3.157 (2.249)
President fixed effects			✓
Log-likelihood	-395.49	-356.99	-327.52
Observations	65	65	65

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:** Our model's predictions for executive order significance correlate with Chiou and Rothenberg's scores at 0.574.

**Figure B.2:** Public Mood and the Marginal Effect of Presidential Partisanship



Estimates based on model (3) of Table 3. The solid line shows the predicted increase in the number of unilateral actions issued by Democratic presidents relative to Republican presidents as the public mood moves in a liberal direction. The shaded area represents the 90% 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.

2ex

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

### **C.5.1 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