

SEARCHING FOR A SILENT MAJORITY
AT THE CONSTITUTIONAL CONVENTION OF 1787

by

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(Under the direction of Keith L. Dougherty)

This thesis examines the effect of delegate ideology on delegate verbosity at the Constitutional Convention of 1787. It continues recent trends in the field of American political development in applying quantitative methods to investigate how and why political phenomena occur. The thesis makes use of original data on delegate verbosity at the Constitutional Convention gathered by the author. Controlling for alternative explanations of delegate participation in debate, statistical analysis reveals that more ideologically extreme Convention delegates, particularly those who favored a stronger and more energetic national government, were more likely to participate.

INDEX WORDS: Constitutional Convention, American political development, Delegate behavior, Silent majority

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1 Introduction

How did delegate behavior shape the Federal Convention of 1787? The primary purpose of this thesis is to build on prior work that examines delegate behavior at the Constitutional Convention through an empirical lens. The secondary purpose of this thesis is to demonstrate how Political Science can continue to advance into a new realm of scholarship on the Convention by moving beyond questions about the intentions of the writers of the Constitution.

Few would debate that the Constitution is integral to American government. However, many do debate what the authors of the Constitution meant by what they wrote and why they chose the institutional designs they did. Unfortunately the records of the Constitutional Convention are less than illuminating. With such importance attached to the words of the delegates to the Convention, a better understanding of how and why certain delegates are better represented than others in the historical record also becomes essential. One possibility is that more ideologically extreme delegates spoke more often because they needed to convince their fellow delegates of the merits of their policy preferences. I test this theory using ideological preference scores de-

veloped for the delegates at the Constitutional Convention (Dougherty and Heckelman 2011) as well as original data on delegate verbosity gathered by the author. Statistical analysis of the relationship between delegate ideology and delegate verbosity is conducted using several different specifications as well as checks on the robustness of the findings.

If more ideologically extreme delegates to the Convention were more verbose than their more moderate peers, this could mean that traditional accounts and explanations of American Constitutionalism are biased. It could also mean that a “silent majority” existed at the Constitutional Convention. A “silent majority” at the Constitutional Convention can be conceptualized as a group of delegates who occupied the center of the ideological spectrum and largely refrained from participating in debate. The presence of such a group could mean that the foundations of American government were established by a less vocal (and thus less explored) faction of Convention delegates. Evidence of a “silent majority” weakens the position of those who favor an originalist interpretation of the Constitution because the record is biased in favor of more ideologically extreme delegates. If this is the case, appeals made by modern politicians and political commentators predicated on original intent might be skewed away from the thinking which actually guided the creation of the American Constitution.

I begin with a survey of previous scholarship related to the Constitutional Convention. This includes the trends in Convention literature and an examination of the concept of the “silent majority.” Next I state the expectations

of my analysis along with an explanation of my theory. This is followed by quantitative analysis of several models of verbosity and delegate ideology. I then present the results of my analysis. I conclude with a discussion of some outstanding issues in my research and opportunities for future research.

2 Foundations

2.1 Delegate Motivation at the Convention of 1787

Most scholarship on the Convention focuses on the motivations of delegates. Previous research can be divided into two types of studies: works that treat the delegates as driven by idealism and works that treat the delegates as motivated by economic self-interest. Prior to the 20th century, criticism of the Convention, and the Founding era in general, was virtually verboten. The Founders (particularly Adams, Franklin, Jefferson, Madison, and Washington) were assigned the status of near demigods and their intentions were exclaimed as having been driven purely by a love of freedom and liberty. While extreme, this is an example of the idealistic treatment of the Founding and by extension, the Constitutional Convention. Most pre-Progressive Era American historians belong in this category; Gladstone (1878) and Walker (1895) are archetypical examples.

Bernard Bailyn, and his students Gordon Wood and Jack Rakove, all have work that details the effects of a combination of philosophy, culture, geography, and society in creating American political thought. This approach implicitly treats the delegates as having acted out of their idealism by stressing the intrinsic traits of the delegates and their particular situations. Bailyn focuses on the writing of pamphleteers from the revolutionary era through the ratification of the Constitution in *The Ideological Origins of the American Revolution* (Bailyn 1992). Gordon Wood in particular emphasizes the uniqueness of the American situation as having a tremendous impact in the development of the 1787 Constitution in *The Creation of the American Republic, 1776-1787* (Wood 1969). *Original Meanings* asserts that ideology is confined by politics (Rakove 1996).

Perhaps the most important work on the subject of delegate motivation at the Convention is Charles Beard's 1913 *An Economic Interpretation of the Constitution of the United States*. Beard posits that the delegates' actions were based on their own economic self-interest (Beard 1966). In particular he focuses on coastal elites, saying those who held public securities were motivated to create a government which would safeguard their investments (Beard 1966). Beard's evidence details the financial holdings of each delegate and sketches the general economic interests of each states' ratifying convention. He believes that the delegates had a high personal stake in creating a national government which would save their investments and secure their economic interests.

When *An Economic Interpretation* was first published, the discussion about the Convention was forever changed. Beard's perspective dominated for the next 40 years but in 1956, Robert Brown's *Charles Beard and the Constitution* is widely interpreted as having discredited Beard's work by showing the scholarly failings of *An Economic Interpretation*. Two years later, Forrest McDonald followed with *We the People: the Economic Origins of the Constitution*. McDonald (1958) also heavily criticizes Beard and attempts to show that economic interests played a more nuanced role in determining the behavior of delegates. However the work is much more of a thorough examination of the economic and constituent influences of the delegates (addressing many of the deficiencies and gaps of Beard) than a persuasive argument in favor of an economically motivated group of delegates. McDonald's greatest contributions to scholarship on the Constitution are his efforts to determine individual votes from the bloc voting system in use at the Convention and his gathering of economic data on the delegates. Under the rules of the Convention, only the votes of the various states were recorded. Thus there are very few delegate votes in the Journal. To understand what drove delegate action we must know how delegates acted in response to motions at the Convention. By combining attendance records, public statements, private letters, and any other available clues, McDonald is able to determine individual votes of delegates on 16 roll calls (McDonald 1958).¹

¹McDonald was able to determine the individual delegate votes on 16 salient motions. Most of these motions are related to the establishment of a national government. None of the 16 motions relate to the issue of slavery. I have referred to these votes as the

When considering the Constitutional Convention of 1787, it is not only necessary to know what previous scholars have said about the Convention but to also observe some facts without interpretation. First, only 12 of the 13 states sent delegates to attend. In all of the statistical analyses of the Convention discussed in this paper, only 53 of the 55 delegates who attended the Convention are included in the data. William Houston (NJ) and George Wythe (VA) are dropped from the data sets because they left Philadelphia within two weeks of their arrival (and were not present when any of the “McDonald 16” roll call votes occurred). No more than 11 of the States were ever present at the same time and typical daily attendance at the Convention was no more than 40 delegates (Farrand 1966 Vol. III). There were 569 recorded votes during the Convention (McGuire and Ohsfeldt 1986) and less than half of these motions passed (Dougherty and Heckelman 2006). Ultimately, only 39 of the delegates signed the Constitution.

Despite Brown and McDonald’s criticisms of Beard, the notion of the delegates as economically motivated has not disappeared. McGuire and Ohs-

“McDonald 16” in later portions of this paper. To better understand how McDonald created his data on the individual votes, consider the following hypothetical Motion 1. State “A” has three delegates, all of whom are in attendance on the day when Motion 1 is being voted upon. Delegate “X” introduced Motion 1 and can thus be assumed to be in favor of passage. However State “A” votes against adoption of Motion 1. Thus the other two delegates from State “A,” Delegate “Y” and Delegate “Z” must have voted against Motion 1. So for Motion 1, we now know the individual votes for delegates from State “A.” While determining individual votes is rarely as straightforward as this, it is illuminative of the process which McDonald and others have used to learn more about the behavior of individual delegates at the Federal Convention (See for example McGuire 1988; 2003; McGuire and Ohsfeldt 1986; Carlsen and Dougerty 2012; Dougherty and Heckelman 2011).

feldt use McDonald's 16 "deciphered" votes in statistical analysis to show that personal interests (a combination of economic and constituent interests) outperform other factors in driving delegate voting preferences (McGuire and Ohsfeldt 1986). However the small sample size prevents their findings from being generalizable. McGuire uses the same 16 votes in other studies (McGuire 1988; 2003; McGuire and Ohsfeldt 1986). This effort differs from his co-authored piece two years earlier in terms of the focus on topics where self-interest is expected to dominate and votes on which economics are thought to be of little consequence. Building on McGuire and Ohsfeldt's 1986 effort, McGuire (2003) expanded the pre-existing model to the delegates of the state ratifying conventions and again finds that economic interests were more influential in predicting vote preferences than ideological motivations.

Heckelman and Dougherty (2007) question the validity of the 16 votes established by McDonald and used by McGuire and Ohsfeldt (1986) and McGuire (1988; 2003) because they believed that McDonald assumes delegates within states voted the same as the recorded vote of their state unless he had specific evidence to the contrary. This was an issue which was also identified by McGuire and Ohsfeldt (1986) when they found incorrect total tallies in two of the 16 votes compiled by McDonald, but chose to disregard the errors. To address uncertainty over delegate votes, Heckelman and Dougherty (2007) create a new regression baseline that closely approximates the one used by McGuire and Ohsfeldt (1986) and McGuire (2003) and then remove the non-confirmed delegate votes from the regression analysis and

find that ancestry and demographics declined in importance leaving delegate economic interests the most predictive factor in a delegate's voting preference.

Building on these findings, Dougherty and Heckelman (2008) analyze personal and constituent interests on motions relating to slavery. They are able to determine the delegate votes for nine motions and find that even on the issue of slavery, personal interest is a better predictor of vote preference than constituency or ideological influences.

Neither the proponents of economic or philosophical and demographic motivations as the driving force behind Convention delegates have presented an overwhelming argument nor has there been definitive evidence in favor of one side over another. Primary documents have been well scoured and even if a letter or diary indicating in plain language the motivations of one of the delegates emerges, it is unlikely to compel the other faction to admit defeat.

In my analysis, delegates are treated as if they are sincere actors and placed on a one dimensional preference scale. I employ a single dimensional preference scale to help understand which delegates spoke more at the Convention and why.

2.2 The “Silent Majority”

The idea of a moderating presence in the electorate (dubbed the “silent majority” or the “mighty middle”) is at the core of democratic political theory.² Democratic government is inherently the government of the majority of a state’s citizens. However the “silent majority” often means the unheard and, or, unobserved portion of the electorate in modern parlance. The contemporary origin of the phrase comes from a November 3rd, 1969 televised speech by President Richard M. Nixon (Mason 2004). While the author of the speech remains a mystery, logic dictates that it was most likely penned by Nixon speech writers Patrick Buchanan and William Safire, or by President Nixon himself. Former Nixon aide Charles W. Colson notes that the November 3rd speech was meant to specifically target “Middle America” as the “silent majority” (Friedman and Levantrosser 1991).

Though mental images of the year 1969 in America conjure up protests of the Vietnam War and continuing strife over civil rights and desegregation efforts, it is clear that the majority of Americans do not fit the mold of progressive activists. In the year after Nixon’s November 3rd speech, Opinion Research Corporation polls found that three-quarters of Americans identified themselves as belonging to the “silent majority” (Mason 2004). Scammon and Wattenberg’s *The New Majority* was published in 1970, decrying the end of the New Deal Coalition after they discovered that the fewest number

²See Black (1948) and Downs (1957) for a discussion of the role of the median voter in deliberative democratic institutions.

of Americans self-identified as Democrats since the election of Truman in 1948.³

I take the term the “silent majority” to mean the mass of individuals who exist at the center of the ideological spectrum whom, for the most part, remain in the background of political discussion. I use this definition within the context of this paper because of the lack of a clear and exact definition provided by the literature. The idea can be applied to the Constitutional Convention as well. According to the records of the Convention, the proceedings were often dominated by a small but vocal contingent. The members of this more visible group were often on opposite sides of the debate.

Woody Holton (2006) argues the delegates knew that the Constitution would have to be ratified by the voters of the various states and this limited their ability to create a Constitution which would have more closely resembled delegate preferences. Adding to the idea of a constraining effect on the delegates is the notion of a proto-electoral connection. Carson and Jenkins (2010) demonstrate that members of the House of Representatives in the nineteenth century operated under many of the same representative principles as those laid out in Mayhew’s *Congress: The Electoral Connection* (1974, 2004). If the electoral connection was present in the 1800s, it is possible that it also was present in the late 1700s. Thus it is conceivable to imagine that the delegates felt a connection to those they were sent to represent and

³N.B. that the phrase “silent majority” does not appear in the index of *The New Majority*.

that some of them knew they would be held accountable for their collective actions at the Convention even though the proceedings of the Convention were to be kept secret.⁴ As a result of their constraint, perhaps delegates decided to occupy the ideological center and refrained from participating in the debate as they might have under other circumstances. Were the more ideological extreme delegates to the Constitutional Convention more likely to talk? What other factors might have influenced delegates to participate in debate? By answering these questions, the presence of a “silent majority” at the Constitutional Convention can be assessed.

3 Modeling Delegate Verbosity

I measure delegate ideology on a single dimension based on preferences over the scope of a national government. My hypothesis is that as delegate ideology becomes more extreme, delegate verbosity increases. Said slightly differently, delegates with stronger revealed preferences over the size and scope of the proposed national government (i.e. more extreme on the single dimensional scale) will talk more than their more moderate peers. To test this

⁴I say collective action rather than individual action because of the rules of secrecy under which the Convention operated, preventing anyone but the delegates from knowing who said or did what. The secrecy of the Convention went unbroken until a joint resolution of Congress in 1818 forced the publication of the official record of the Convention, *The Journal, Acts, and Proceedings of the Convention* (Farrand 1966 Vol. III).

theory, I compare how much a delegate spoke to their ideological position, while accounting for other factors which might explain the length of delegate speeches. My hypothesis will be confirmed if delegates at the ideological extremes talk more than those delegates closer to the ideological center.

Everything else equal, more ideologically extreme delegates are forced to speak more often because their motions are less popular than motions proposed by more moderate delegates. Ideologically moderate delegates are more likely to have their preferred positions adopted by the nature of their positions being closer to the ideological center of the deliberative body. As such, moderate delegates did not need to engage in lengthy defense of their preferred positions in order to gain support like more extreme delegates did. Proposals closer to the center quintile are more likely to pass regardless of delegates' verbal support. Delegates at the extremes may engage in more talking in hopes of creating support for proposals that are further from the median position. If the concept of the "silent majority" is applicable to the Convention, delegates clustered near to the ideological center should be relatively quiet compared to delegates located near the ideological extreme.

The dependent variable is one of two measures of how much a delegate spoke. The first, *Delegate Verbosity*, is the length a delegate spoke over the entirety of the Constitutional Convention. It is measured as the total vertical space, in centimeters that a delegate has in the transcript of the Convention as reported in Madison's notes (Farrand 1966). The measure is an approximation of the number of lines of speech produced by a delegate at

the Convention.⁵ On average, 1.5 centimeters of continuous vertical text is equal to four lines of text and each line of text contains roughly 8.84 words. Thus .375 vertical centimeters of text is equal to roughly nine words. The range of the data is quite large as seen in Table 3.1, with an average delegate having 189 centimeters of recorded text (126 lines or 1114 words) across the course of the Convention. These data were collected by the author.⁶

One issue with *Delegate Verbosity* is that it favors those individuals who spoke infrequently but for longer periods and those for whom Madison took more copious notes. As a robustness check, I rerun all the models with an alternative dependent variable, *Delegate Speeches* which is the total number of times a delegate was recorded as speaking at the Convention in Madison's notes. The data were gleaned from Farrand's *Records* by the author. The average delegate spoke up 56.6 times with a median observation of 32 contributions to Convention debate.

The key explanatory variable is *Delegate Ideology*, a one-dimensional ideological measure of delegate positions at the Federal Convention of 1787 created by Carlsen and Dougherty (2012) using W-NOMINATE (Poole and Rosenthal 1985). The scores are based on the total inferred individual delegate votes inferred on all substantive roll calls. The lower bound of the Convention W-NOMINATE scores has a value of negative one and is associ-

⁵Vertical text length was used rather than horizontal text space following the example of Dougherty in his coding of debate length. Vertical text space was chosen over the counting of lines as a way in which to make the coding process more efficient

⁶Additional information about the coding procedure used to create this original data set is available upon request.

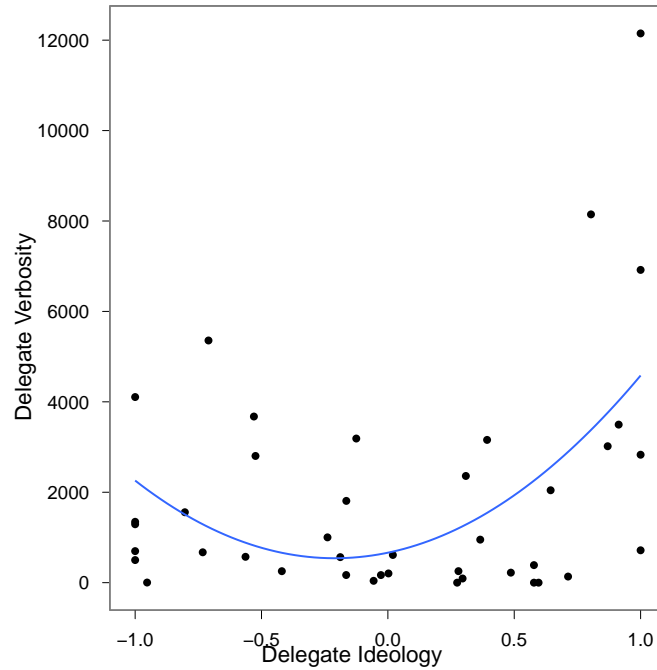


Figure 1: Verbosity as a Quadratic Function of Ideology

ated with extreme pro-states rights and anti-national government preferences. Delegates such as Elbridge Gerry, Luther Martin, and John Lansing, Jr., all of whom vehemently objected to the final product of the Convention, are at that end of the ideological scale. The upper bound of the W-NOMINATE scores has a value of positive one and is associated with a preference for a strong national government. Delegates like James Madison, James Wilson, and George Read, all champions of the Convention during the later debates over ratification, are located at the upper end of the W-NOMINATE scores.

Because delegate verbosity is predicted to be a quadratic function of ideology, $Delegate\ Ideology^2$ is included in the model along with $Delegate\ Ideology$ to account for the non-linearity. This predicted relationship can be seen in Figure 1 which plots $Delegate\ Ideology$ plus $Delegate\ Ideology^2$ against $Delegate\ Verbosity$ on a scatterplot of the data.

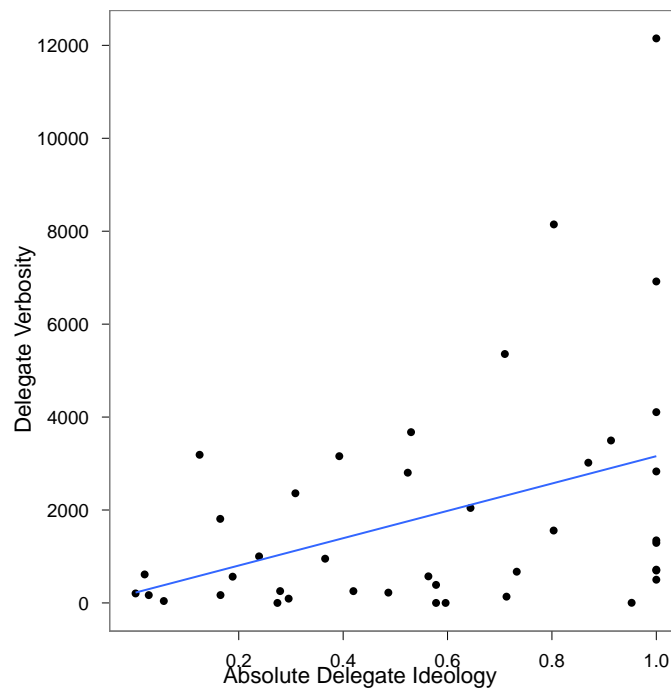


Figure 2: Linear Relationship Between Verbosity and Absolute Ideology

$Absolute\ Delegate\ Ideology$ was created by taking the absolute value of $Delegate\ Ideology$ which folds the scale of -1 to 1 to 0 to 1. The purpose of this is to check the appropriateness of the predicted quadratic relationship between ideology and verbosity. $Absolute\ Delegate\ Ideology$ implicitly

assumes that *Delegate Verbosity* will be minimized at zero and rise linearly from the intercept. The quadratic relationship of *Delegate Ideology* and *Delegate Ideology*² allows *Delegate Verbosity* to be minimized anywhere and grow curvilinearly. The linear specification allows for an investigation of whether verbosity increases from the middle of the ideological space or somewhere else. Figure 2 presents a visualization of the alternative relationship of *Absolute Delegate Ideology* against *Delegate Verbosity*.

TABLE 1: DESCRIPTIVE STATISTICS OF THE DATA

Variable	Mean	Median	St. Dev.	Min	Max
Delegate Verbosity	189.000	71.600	252.900	0.000	12149.000
Delegate Speeches	56.600	32.000	62.454	0.000	223.000
Delegate Ideology	0.022	0.002	0.668	-1.000	1.000
Delegate Ideology ²	0.479	0.356	0.367	0.000	1.000
Absolute Delegate Ideology	0.778	0.578	1.440	0.002	1.000
Age	43.200	42.000	12.184	26.000	81.000
College	0.683	1.000	0.471	0.000	1.000
Legislative Experience	8.000	6.000	5.861	0.000	29.000
Political Experience	12.000	10.000	8.419	1.000	42.000

Table 1 lays out the summary descriptive statistics of both the dependent and independent variables. Overall there is a good deal of variation in the observations. Four control variables are also included *Age*, *College*, *Legislative Experience*, and *Political Experience*. *Age* is the age of a delegate at the time of the Convention (the summer of 1787). The youngest delegate at the Convention was Jonathan Dayton at 26 whilst the oldest was Benjamin Franklin at 81, and the average delegate age was 43. Data for this measure

is from Dougherty and Heckelman (2011). I expect that the older a delegate was, the more likely he was to participate in debate (i.e. be more verbose). This expectation is based on the idea that older delegates were more comfortable asserting themselves and were more likely to see themselves as vocal leaders because of their seniority.

College is a dichotomous measure which indicates if a delegate had formal college education. Delegates are coded “one” if they attended college (in the colonies or abroad) and a “zero” otherwise. The modal Convention delegate had a college education. Data for this measure are from Dougherty and Heckelman (2011). I expect that delegates who attended college were more verbose than delegates who did not. A college education should give delegates greater rhetorical abilities because of the classical nature of formal education during the Eighteenth Century which in turn would make them more likely to speak than other delegates who lack this type of training.

Legislative Experience is a measure of the total number of years that a delegate had previously served in local, state, or national legislatures. The average delegate had eight years of legislative service prior to the Convention though Roger Sherman, George Read, and John Rutledge all had over 20 years of experience as a legislator. Data for this measure are from Dougherty and Heckelman (2011). Legislative bodies are deliberative bodies in which the ability to engage in debate and public speaking is prized. Presumably increased familiarity with a legislative setting would embolden a delegate to participate at a greater rate than a delegate without as much legislative ex-

perience. Thus, as *Legislative Experience* increases, a corresponding positive increase in verbosity is expected.

An alternative measure of experience that might make a delegate speak more is *Political Experience*, the total number of years that a delegate had previously served in any branch of governmental service at the local, state, or national level. The average delegate had 12 years of governmental service but there was a great deal of variation across observations (Nicolas Gilman had only one year of prior public service while Roger Sherman had amassed 42 years of public service). Data for this measure are from Dougherty and Heckelman (2011). Increasing *Political Experience* is expected to correspond to an increase in verbosity due to increased familiarity with public speaking in political forums.

3.1 Additional Issues

As previously mentioned, only 55 delegates attended the Convention. Of these 55, two (Wythe and Houston) are traditionally omitted because they attended for less than two weeks. Twelve additional delegates are dropped from the data used here. Eleven were omitted because they do not have enough roll call positions to create a W-NOMINATE score. The twelfth observation dropped from the data set is the Convention's President, George Washington. Washington spoke only a handful of times at the very beginning and very end of the Convention. In his closing speech to the remaining delegates, Washington reveals that he has purposefully refrained from voicing

his opinions for fear of unduly influencing the proceedings (Farrand 1966 Vol. II). Since Washington engaged in strategic nonparticipation, his inclusion in the model would be problematic.

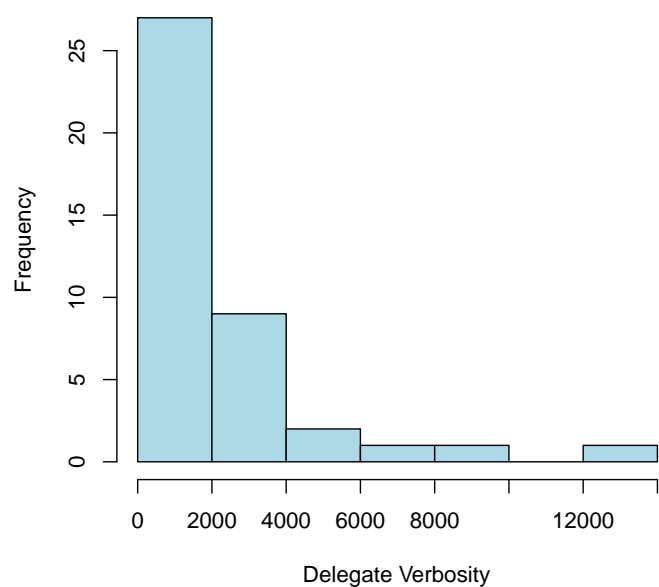


Figure 3: Distribution of Transcript Length

Another concern in modeling the data was the non-normal distribution of the dependent variable. Both *Delegate Verbosity* and *Delegate Speech* are bounded by zero as a delegate cannot speak less than zero times. An examination of the distribution of *Delegate Verbosity* in Figure 3 reveals that not only is it bounded by zero but has a definite positive tail. Looking at the distribution of *Delegate Speech* in Figure 4 reveals the same conditions,

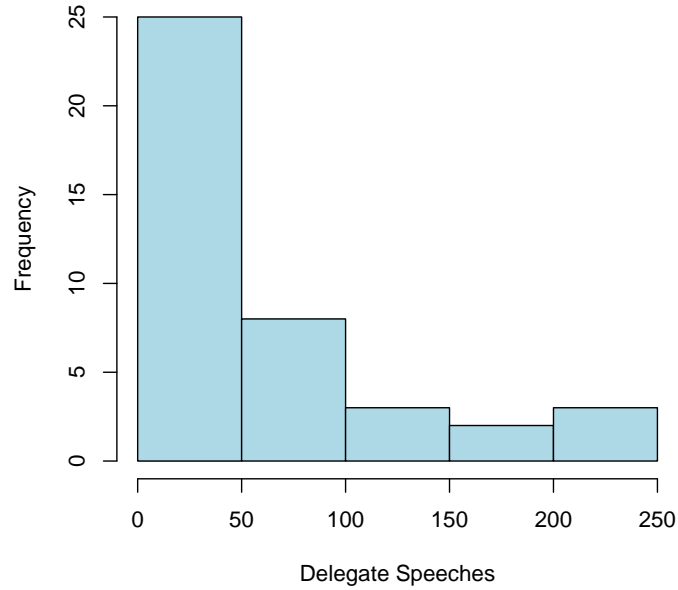


Figure 4: Distribution of Number of Delegate Speeches

a dependent variable bounded at zero with greater variance at the high end of positive observations.

To overcome this issue of non-normality, model estimation was made with a Gamma and Negative-Binomial distributions rather than a normal distribution. Models 1 through 4 for which *Delegate Verbosity* is the dependent variable use the Gamma while and models 5 through 8 for which *Delegate Speech* is the dependent variable use the Negative-Binomial (because *Delegate Speech* can only be an integer, the model is a count model). The Gamma and

Negative-Binomial distributions were used to insure proper modeling of the error term. As a robustness check of this decision, I also estimated models 1 through 8 using ordinary least squares (OLS). The results of the alternative specification can be seen in Tables 4 and 5 in Appendix A. Using OLS produced similar, though albeit weaker, results.

4 Results

4.1 Delegate Verbosity

Table 2 presents the results of models 1 through 4.⁷ In all four models, delegate ideology is a positive and significant predictor of verbosity. *Delegate Ideology* is not significant in model 1, indicating that the quadratic function is minimized near zero. The significance of *Delegate Ideology*² confirms my hypothesis that more ideologically extreme delegates were more likely to participate in debate at the Constitutional Convention. In models 1 and 2, a one unit increase in *Delegate Ideology* and *Delegate Ideology*², on average, raises the expected amount of text in the Convention debates by a factor of roughly 550%, *ceteris paribus*. In models 3 and 4, a one unit increase in

⁷A third model specification that uses a curvilinear form of *Absolute Delegate Ideology* provided almost identical results to the linear form of *Absolute Delegate Ideology*. The results of that model estimate (model 9) is presented in Table 6 in Appendix B.

Absolute Delegate Ideology raises the expected amount on text in Madison’s notes by a factor of 850% and 730% respectively, on average, all else equal.

TABLE 2: RESULTS OF VERBOSITY LENGTH MODELS

Input	Model 1	Model 2	Model 3	Model 4
Intercept	3.691*** (0.945)	3.767*** (0.895)	3.602*** (0.906)	3.881*** (0.896)
Delegate Ideology	0.440 (0.295)	0.568** (0.269)		
Delegate Ideology ²	1.758*** (0.516)	1.616*** (0.486)		
Absolute Delegate Ideology			2.256*** (0.525)	2.117*** (0.516)
Age	0.036* (0.020)	0.034* (0.019)	0.021 (0.018)	0.024 (0.019)
College	0.852* (0.447)	0.953** (0.418)	0.956** (0.420)	0.900** (0.411)
Legislative Experience	0.690 (0.43)		0.094** (0.039)	
Political Experience		0.044 (0.028)		0.042 (0.028)
Log Likelihood	-331.210	-331.210	-330.890	-331.820
AIC	676.400	676.400	673.800	675.600
Gamma Dispersion	1.385	1.237	1.229	1.197
Null/Residual Deviance	120.1/92.8	120.1/92.9	120.1/91.7	120.1/95.0

Note: N = 41. Models estimated using GLM with Gamma error distribution. Standard errors are in parenthesis. Significance codes: “*” = significant at the .1 level, “**” = significant at the .05 level, “***” = significant at the .01 level.

There does not seem to be definitive evidence of a quadratic relationship between delegate verbosity and ideology. Both the quadratic and linear model specifications of delegate ideology seem to work equally as well pre-

dicting levels of delegate verbosity. However, looking back to Figures 1 and 2, it is clear that the two ideological extremes did not have equal levels of verbosity. One reason that the two ideological extremes do not have equivalent verbosity levels is that many of the most ardent anti-nationalists did not attend the Convention and of those that did come to Philadelphia, many did not stay until the end of the Convention. Of the three delegates who have ideological scores at the lower bound of the preference scale (Elbridge Gerry, Luther Martin, and John Lansing, Jr.), only Gerry remained in Philadelphia until the Convention completed its business in mid-September 1787. Thus the ideologically extreme delegates opposed to the Constitution created a bias against the probability of their having levels of verbosity equal to those extreme delegates in favor of stronger national government because of their attendance. An additional explanation of the difference in verbosity between extreme anti-nationalist delegates and extreme pro-nationalist delegates is that the pro-nationalist contingent set the Convention agenda with the early introduction of the Virginia plan. The introduction of the Virginia Plan also attempted to substantially change the position of the status quo. Prior to the introduction of the Virginia Plan on May 29th, the purpose of the Convention had expressly been to convene for the, “sole and express purpose of revising the Articles of Confederation” (Farrand 1966 III 13-14). Not only was the Virginia Plan radically different from the existing government under the Articles, but resolutions 13 and 15 proposed to adopt a new government absent consent of the existing government (Farrand 1966 I). Given the dras-

tic change being proposed, proponents of the Virginia Plan would need to spend considerable time explaining and lobbying their position. Delegates on the opposite extreme would surely spend a fair amount of verbiage engaging in demurrals, but not nearly so much as those attempting to explain new introduced concepts and change the purpose of the Convention. A final consideration is that one cannot rule out the possibility that Madison might have been biased against recording the speeches of the anti-nationalists as much as he did his fellow pro-nationalists.

Age is significant only in models 1 and 2 (those estimated using *Delegate Ideology* and *Delegate Ideology*²). In models 1 and 2, a one year increase in *Age*, on average, raises the expected amount of text in the Convention debates by a factor of between two and four percent, *ceteris paribus*. *College* is positive and significant in all four models. Across all four models, delegates who attended college were expected to have roughly 150% more recorded text in the Convention debates, on average, than those delegates who did not, all else equal. *Legislative Experience* is significant only in model 3, where a one year increase in previous time served in a legislative body is expected to produce a ten percent increase in text space in Madison's debates, on average, *ceteris paribus*. Interestingly, *Political Experience* is insignificant in all models. Overall, factors like a delegate's age and education seem to impact their levels of verbosity to a much greater degree than their time of public service (or their legislative service more specifically).

4.2 Delegate Speech

Table 3 presents the results of models 5 through 8 which repeated the specifications of models 1 through 4 except it used *Delegate Speech* (the number of times a delegate spoke at the Convention) instead of *Delegate Verbosity* as the dependent variable. A delegate's ideology is a significant predictor of *Delegate Speech* in models 5, 7, and 8. A one unit change in the ideological measured raised the predicted number of speeches by a factor of between 166% and 186%, on average, all else equal.

Age, *College*, and *Political Experience* are all insignificant in models 5 through 8. *Legislative Experience* is positive and significant in models 5 and 7. Despite the robustness of the result (given that it is significant in models which were specified with *Delegate Ideology* plus *Delegate Ideology*² and *Absolute Delegate Ideology*), the substantive impact is limited. An additional year of legislative service prior to the Convention is associated with an increase in the amount of text in Madison's notes by a factor of between eight and nine and half percent, on average, *ceteris paribus*.

The important takeaway from the testing of the two different dependent variable specifications is that important information and nuances may be lost by the use of the less descriptive number of speeches (*Delegate Speech*) rather than total delegate verbosity (*Delegate Verbosity*). This assertion is made based on the fact that the models in which *Delegate Verbosity* is the dependent variable, all the models are significant regardless of whether ideology

Table 3: Results of Delegate Speech Models

Input	Model 5	Model 6	Model 7	Model 8
Intercept	2.1736** (0.9057)	2.2844** (0.9199)	2.2253** (0.9280)	2.4716*** (0.9557)
Delegate Ideology	0.3368 (0.2814)	0.4519 (0.2752)		
Delegate Ideology ²	0.8173* (0.4933)	0.7545 (0.4979)		
Absolute Delegate Ideology			1.0505** (0.5366)	1.0052* (0.5494)
Age	0.0092 (0.0191)	0.0101 (0.0197)	0.0006 (0.0184)	0.0041 (0.4382)
College	0.4241 (0.0408)	0.4527 (0.4292)	0.4722 (0.4299)	0.3774 (0.4382)
Legislative Experience	0.0784* (0.0408)		0.0908** (0.0397)	
Political Experience		0.0419 (0.0288)		0.0386 (0.0295)
Log Likelihood	-200.260	-200.870	-200.61	-201.8
AIC	414.5	415.7	413.2	415.8
Null/Residual Deviance	58.654/48.950	57.262/49.002	57.843/48.976	54.965/49.087
Theta (SE)	0.805 (0.172)	0.784 (0.166)	0.793 (0.168)	0.749 (0.158)

Note: N = 41. Models estimated using GLM with a Negative-Binomial error distribution. Standard errors are in parenthesis. Significance codes: “*” = significant at the .1 level, “**” = significant at the .05 level, “***” = significant at the .01 level.

is modeled using *Delegate Ideology* plus *Delegate Ideology*² or *Absolute Delegate Ideology*. Meanwhile, in models that used *Delegate Speech*, those models which are specified with *Absolute Delegate Ideology* in their estimation are

more consistently significant. Another reason to suspect the superiority of (*Delegate Verbosity*) over *Delegate Speech* as a more reliable dependent variable is that there is no consistency between model specifications based on ideological measures. Models 5 and 7 have the best model fit (based on the respective AIC and log-likelihood values) but model 5 uses *Delegate Ideology* plus *Delegate Ideology*² while model 7 uses *Absolute Delegate Ideology*. For models 5 through 8, the best performing models (again, based on AIC and log-likelihood) are those that contain *Legislative Experience*, the only variable to be statistically significant in that group of models other than the ideological measures. In Table 4.1, *Legislative Experience* is inconsistently significant, suggesting that *Delegate Speech* and *Delegate Verbosity* cannot be used interchangeably as the dependent variable and that model estimates will be noticeably different depending on which dependent variable is used.

5 Discussion

The results indicate that revealed delegate ideological preferences contributed to delegate behavior at the Constitutional Convention. Specifically, the analysis suggests that participation in floor debate at the Convention was dominated by ideologically extreme delegates, in particular the extreme partisans in favor of a stronger and more energetic national government. The success

of this research demonstrates that it is possible to conduct empirical analysis of the Constitutional Convention based not on *a priori* information about the delegates, but on delegates' actions during the deliberative meetings in Philadelphia in the summer of 1787.

Though this analysis does not say anything about ideologically extreme delegate's substantive legislative success or failure relative to more ideologically moderate delegates, it does provide evidence in favor of a "silent majority" at the Constitutional Convention. Empirical evidence demonstrates that more centrist delegates had lower observed levels of verbosity than more ideologically extreme delegates. An implication of the finding of a "silent majority" at the Convention is that, assuming single dimensional preferences, delegates who did not engage in a great deal of debate may be more likely to have seen their preferred motions adopted. Future research on the Constitutional Convention should investigate a possible relationship between legislative success at the Convention and delegate verbosity. More research is needed to expand upon the initial support found here for a "silent majority" at the Constitutional Convention.

Support for a "silent majority" is also important given the frequency of appeals made to original intent as the proper method of understanding the Constitution in both contemporary politics and the legal system. Pope and Treier comment that,

"Given the continuing debates over interpretations of the U.S. Constitution, understanding the political circumstances behind

the decisions made by the founders is of paramount importance. When scholars on both the left and the right assert that their position is supported by the founding generation, no effort should be spared to better understand those debates” (2011, 290).

The idea of a “silent majority” at the Convention means that the views and opinions of many of the Constitution’s authors remains unknown. The most famous and oft quoted explanation of American Constitutionalism, *The Federalist Papers* were written by two of the most extreme delegates at the Constitutional Convention, Alexander Hamilton and James Madison. While it is well known that *The Federalist Papers* were written to persuade citizens in New York and the rest of the states of the merits of the Constitution, just how extreme its authors were compared to the rest of the delegates at the Convention is less widely known. Because the opinions of more moderate delegates were overshadowed by contributions from more ideologically extreme delegates, some political and philosophical explanations of the Constitution may be unrepresentative of the reasoning actually used to craft the structure of American government. While the collected papers of individuals like Hamilton, Madison, and Wilson are easily obtained, those of less verbose and more centrist delegates like Abraham Baldwin, Daniel of St. Thomas Jenifer, and William Richardson Davie are much more difficult to come by and infrequently cited. Finally, in the teaching of the Constitutional history, centrist delegates are rarely talked about. The results of this analysis suggest that those who call for “originalism” in the reading of the Constitution may

have less firm ground to stand on than they believe because only a portion of original intent is actually known from the records of the Convention and this portion of the record is biased in favor of ideologues.

Future research might consider how delegate behavior changed over the course of the Convention as well as by issue area. It is conceivable that while ideologically extreme delegates may have been more likely to speak up more often and at greater length (especially the strong pro-nationalists) than their more moderate peers in general, perhaps this is a phenomenon that only holds under certain circumstances. Future research on the topic of delegate verbosity at the Constitutional Convention might also seek to better understand what particular factors influenced the length of individual speeches.

Fundamentally, this thesis is about moving beyond issues of delegate intention or motivation to an explicit examination of delegate behavior at the Constitutional Convention. Here I follow the example of Dougherty and Heckelman (2006) and Pope and Treier (2011) in applying statistical analysis to the Constitutional Convention. Though this work is limited in its scope, it demonstrates the importance of research which can be described as American political development and how quantitative techniques can be integrated into that approach. How and why institutions develop can help explain how to understand the modern American institutional framework and contemporary political issues. And when contemporary politicians reference the Founding, the American electorate ought to be able to confidently

give their assent or dissent to the use of historical events. A robust analysis of the Founding, of which the Constitutional Convention is an integral part, is a crucial component of this path to understanding American political development.

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Appendix A

Reestimating the Models Using OLS

Table 4 presents models 1 through 4 estimated assuming a normal distribution of error variance. Overall the estimates of models 1b through 4b are nearly identical in sign and significance as to those estimated with an assumption of Gamma distribution. However the AIC of models 1 through 4 indicate better overall model fit than their alternative iterations. As such, I conclude that the use of the Gamma distribution for the estimation of models 1 through 4 rather than using the Gaussian distribution is the appropriate choice for correctly modeling *Delegate Verbosity*.

Table 5 presents models 5 through 8 (in which *Delegate Speech* is the dependent variable). Models 5 through 8 are estimated assuming a normal distribution of error variance. Overall the coefficient estimates of models 5b through 8b are nearly absent any statistical significance. This is not in and of itself problematic except for the fact that multiple other estimates of models 5-8 (including those modeled with FWGLS, a Poisson distributions, and a Negative-Binomial distribution) all produce statistically significant coeffi-

TABLE 4: RESULTS OF ALTERNATIVE VERBOSITY LENGTH MODELS

Input	Model 1b	Model 2b	Model 3b	Model 4b
Intercept	-2628.700** (1758.400)	-2505.100** (1189.500)	-2670.350** (1101.850)	-2308.500* (1161.400)
Delegate Ideology	1100.600 (683.600)	1297.800 (774.700)		
Delegate Ideology ²	2908.700** (1424.900)	2738.300** (1256.400)		
Absolute Delegate Ideology			3295.490** (1316.210)	2949.300** (1181.400)
Age	25.300 (31.900)	31.000 (30.300)	4.350 (33.250)	19.000 (28.900)
College	1501.400** (663.700)	1377.800** (648.300)	1691.380** (731.691)	1398.000** (664.000)
Legislative Experience	0.079 (107.300)		167.840 (105.620)	
Political Experience		64.800 (64.300)		62.300 (59.100)
AIC	754.590	755.760	755.240	758.910
R^2 / Adj. R^2	0.344/0.250	0.325/0.228	0.300/0.222	0.234/0.149
F-Stat., p-value	3.67, 0.009	3.370, 0.014	3.850, 0.011	2.760, 0.043

Note: N = 41. Models estimated using OLS with Huber-White robust standard errors. Standard errors are in parenthesis. Significance codes: “*” = significant at the .1 level, “**” = significant at the .05 level, “***” = significant at the .01 level.

cients for various variables in the models.

Likewise, the models themselves seem to provide little reduction in explanation of error variance. Comparison of model fit statistics between models 5-8 (as seen in Table 3) and models 5b-8b confirm that the models of Table

TABLE 5: RESULTS OF ALTERNATIVE SPEECH MODELS

Input	Model 5b	Model 6b	Model 7b	Model 8b
Intercept	-28.270 (45.095)	-23.642 (46.500)	-28.635 (45.193)	-15.975 (47.437)
Delegate Ideology	17.795 (17.235)	25.197 (18.674)		
Delegate Ideology ²	50.206 (33.694)	43.816 (31.078)		
Absolute Delegate Ideology			55.527* (31.033)	43.924 (31.107)
Age	0.089 (0.944)	0.305 (0.905)	-0.250 (0.958)	0.046 (0.932)
College	28.839 (21.377)	24.185 (20.899)	31.995 (21.953)	24.460 (21.076)
Legislative Experience	4.620 (3.097)		5.333* (2.867)	
Political Experience		2.429 (1.955)		2.419 (1.845)
AIC	456.040	458.410	455.230	459.760
R^2 / Adj. R^2	0.260/0.154	0.216/0.103	0.238/0.153	0.149/0.054
F-Stat., p-value	2.450, 0.052	1.920, 0.115	2.810, 0.040	1.570, 0.203

Note: N = 41. Models estimated using OLS with Huber-White robust standard errors. Standard errors are in parenthesis. Significance codes: “*” = significant at the .1 level, “**” = significant at the .05 level, “***” = significant at the .01 level.

3 outperform those of Table 5. I conclude that the use of the Negative-Binomial distribution for models 5 through 8 rather than using the Gaussian distribution is the appropriate choice for correctly modeling *Delegate Speech*.

Appendix B

Comparing Delegate Ideology Specifications

Table 6 presents a comparison of three different functional forms of delegate ideology used to estimate *Delegate Verbosity*. Models 1 and 3 use *Delegate Ideology* and *Delegate Ideology*² and *Absolute Delegate Ideology* respectively. Model 9 uses a curvilinear specification of *Absolute Delegate Ideology* (specifically the square of *Absolute Delegate Ideology*) but is otherwise identical to models 1 and 3.

Figure 5 presents the relationship between *Delegate Verbosity* and *Absolute Delegate Ideology*². The improvement in fit over the linear functional form of *Absolute Delegate Ideology* (as seen in Figure 2) appears to be minimal. This assessment is borne out by the regression results. Coefficient estimates and model fit statistics are very similar. Overall, model 9 performs almost identically to Model 3 suggesting there is very little difference between using a linear or curvilinear functional form of *Absolute Delegate Ideology* to estimate *Delegate Verbosity*.

TABLE 6: COMPARING RESULTS OF ALTERNATIVE FUNCTIONAL FORM SPECIFICATIONS FOR VERBOSITY LENGTH

Input	Model 1	Model 3	Model 9
Intercept	3.691*** (0.945)	3.602*** (0.906)	4.223*** (0.913)
Delegate Ideology	0.440 (0.295)		
Delegate Ideology ²	1.758*** (0.516)		
Absolute Delegate Ideology		2.256*** (0.525)	
Absolute Delegate Ideology ²			1.819*** (0.487)
Age	0.036* (0.020)	0.021 (0.018)	0.022 (0.019)
College	0.852* (0.447)	0.956** (0.420)	0.852* (0.443)
Legislative Experience	0.690 (0.43)	0.094** (0.039)	0.084** (0.041)
Log Likelihood	-331.210	-330.890	-331.740
AIC	676.400	673.800	675.500
Gamma Dispersion	1.385	1.229	1.370
Null/Residual Deviance	120.1/92.8	120.1/91.7	120.1/94.7

Note: N = 41. Models estimated using GLM with Gamma error distribution. Standard errors are in parenthesis. Significance codes: “*” = significant at the .1 level, “**” = significant at the .05 level, “***” = significant at the .01 level.

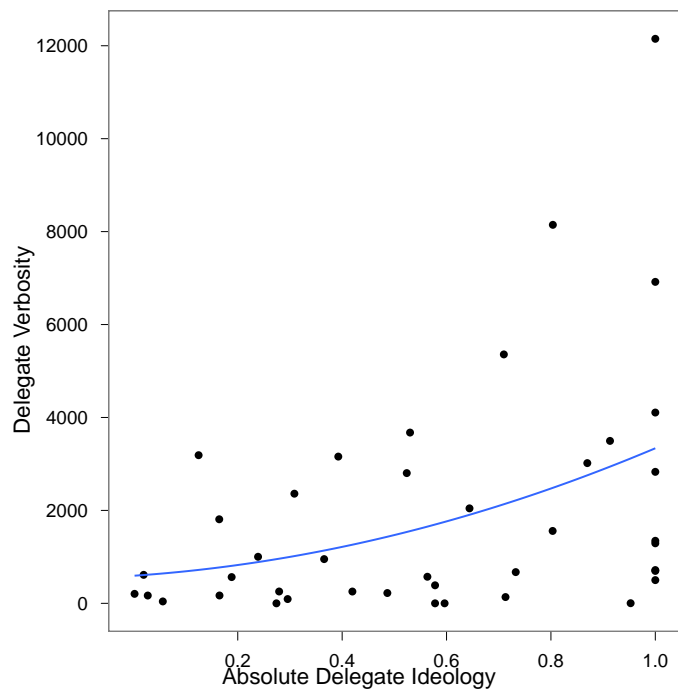


Figure 5: Curvilinear Relationship Between Verbosity and Absolute Ideology²