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April 8, 2020

The Guber Grapple: Assessing the relationship between newspaper coverage, incumbency,
and gender in gubernatorial elections

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Abstract

The Guber Grapple: Assessing the relationship between newspaper coverage, incumbency, and gender in gubernatorial elections

By Raya Machaca

The boom in research on the political economy of media is widespread in content, from election coverage patterns to content bias, the impact of this range of effects is yet to be fully understood. This paper discusses the impact of varying quantities of newspaper coverage in the month before a gubernatorial election in influencing election outcome in terms of plurality vote distribution. For my empirical analysis, I ran a simple multiple linear regression to analyze plurality party impact for the democratic and republican parties. I compiled state-level data from the four major categories that influence election outcome: incumbency status, gender, political/economic climate, and electoral office, in addition to manually compiled data on newspaper coverage by the one of the top three most widely distributed newspapers in each state. These controls take into account environmental factors like economic climate, as measured by the Philadelphia Fed's coincident index; political attitudes, with states characterized as moralistic or traditionalistic; and internal candidate attributes like gender and party affiliation. This study is novel in that I take into account candidate structural advantage in my controls. The results show a statistically significant impact of quantity of press coverage on plurality party vote distribution. There is a clear demonstration of incumbency advantage. Additionally, the more coverage a challenger receives the less votes the opposing plurality party receives. The effect of gender on election outcome is also apparent, for when a democratic female is in the race, Republican plurality votes increase. These results imply that there are arbitrary triggers that sway plurality votes and that media coverage is paramount for unknown candidates in establishing a political platform.

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The Guber Grapple: Assessing the relationship between newspaper coverage, incumbency, and gender in gubernatorial elections

Raya Machaca

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1 Introduction

The autonomy of the electorate’s decision making process is considered to be a fundamental aspect of democracy. It can be acknowledged that access to quality and quantity of information can change the voting tendencies of the electorate, but in order to uphold the terms of an equitable democracy, one hopes that the voting behavior of the public is not affected by arbitrary qualities like race and gender, but rather candidate merit. The field of behavioral economics routinely proves that humans are far more malleable than we tend to believe. “Nudge” Theory illustrates this impressionability. Implementing a variation of a “nudge” can encourage particular routes of decision making [2]. When political parties have an intuitive understanding of which arbitrary nudges attract voters to their party, it encourages the manufacturing of a particular environment to influence public sentiment. This paper examines what might not traditionally be classified as a nudge, but behaves as

one nonetheless: the potential for changes in voting behavior in response to a change in the quantity of newspaper coverage before a gubernatorial election with controls for competitiveness, incumbency, and gender. Specifically, if fluctuations in the quantity of statewide election coverage impact plurality votes and election outcomes in gubernatorial races in the last two decades.

This paper analyzes whether the quantity of election coverage by a state newspaper in the month before the election impacts the quantity of votes that each party receives. This work exists against a background of literature on voting behavior that has established clear empirical trends in incumbency advantage and voter reaction to information asymmetry, but with clear variances across electoral race types and gender. Previous literature notes that this question yields different results depending on the relative genders and incumbency status of the two leading candidates [11] and will be discussed in further detail in the methodology section. “Coverage”, in this case, applies to news that mentions the front-running candidates by name.

My results indicate positive benefits for challengers with increased news coverage, corroborating outcomes in the literature about challenger entry and voter learning when it comes to voter assessment of incumbent versus challenger ability. Previous literature shows that competent challengers who pose a threat to an initially positively received incumbent can neutralize their favorability with voters, although this is contingent how the voter becomes politically informed [10]. Because the specificity of the media environment impacts voter behavior in response to certain variables, the following paragraphs systematically details the frame of reference for the media environment discussed in this paper and it’s context within the literature.

Like bees and flowers, the media and politics are one of this world’s great symbiotic relationships. The media’s role as a provider of both entertainment and news uniquely positions the press to have a significant impact on political opinion and public behavior [6], making it a very important object of study. The media is often to be the primary purveyor of unbi-

ased political information to the public, but media corporations are also profit-maximizing firms, and although they are not legally permitted to fabricate information, media bias manifests in the suppression of information to cater to wider voter preferences [4]. That is, the general political leanings of voters that primarily consume that media source for political information.

A burgeoning literature is developing on the political economy of media, but it is important to consider whether the success of a political candidate can be attributed to the amount of media coverage they receive, or perhaps the amount of coverage their race on a whole receives. A study by Dewenter et al. examines this phenomenon as it applies to media coverage content in German elections, employing an instrumental variable to correct for reverse causality. His estimations show that voting intentions are strongly affected by media regardless of any influence from domestic or international policy events [8].

This effect is not unique to Germany; the power of media to sway voting intention in the United States has also been the object of significant study. Increased media exposure has been shown to lead to increased political popularity [13] which indicates the importance of the press in building a solid voter base. The quantity of coverage is not the only important factor in influencing the electorate; editorial slant has also been shown to impact candidate evaluations and voter choice [9]. Studies of this type are particularly important to behavioral economists as they provide valuable insight into belief updating in voter rational. Although my observations on the interaction of media coverage and gubernatorial election outcomes may allow me to comment on voter behavior, the goal of this project is to examine the effect of a potentially disruptive role the press can play in swaying democratic outcomes.

Furthermore, the press's role in democracy cannot be understated. An active press is regarded to be essential for democratic governance; it has been shown that voters living in regions where their congress person is covered by the press less, are less likely to name and rate that person, and that less media coverage of a congress person enables them to do less work for their constituencies [16]. Since the press is so fundamental for the sustainability

of an active and productive democracy, then it must play an equally important role in ensuring democratic elections and transparency amongst candidates. News sources tend to have political leanings and partisanship of news sources is often recognized by the public, but these biases may still impact voters [7]. This study examines the impacts of media coverage en masse, regardless of the positivity or negativity of the content.

Given the sensitivity of voters to media slant and the established empirical voter regularities that “they entertain biased beliefs about how public policies affect economic outcomes” and that “[they] vote retrospectively: they punish the incumbent for poor and reward him for good macroeconomic performance” [5]; my models discuss the interaction between incumbency status and candidate coverage in an attempt to establish newer empirical trends about how coverage makes the incumbency advantage reactive to candidate performance while in office. This allows future researchers to study the behavioral tendencies of retrospective voters as asymmetric information in politics lessens.

In analyzing the relationship between the media and politics, two schools of thought have arisen concerning the mechanism by which election coverage is induced. The first mechanism postulates that the power and relevance of a political party or candidate dictates election coverage and therefore creates a source of endogeneity from structural advantage. The second mechanism reasons that the press autonomously decides to cover the election or certain candidates. These two potential mechanisms have been classified in the literature of political economy as party logic and media logic respectively. Both logic types are inherently problematic. In the case of media logic “[the] news value orientation [is decided by] common views about what is believed to be intrinsically relevant and interesting for the public [17]”. The sentiment that only information that is deemed “newsworthy” by the current organizational culture of the media landscape could potentially cause cases of asymmetric information with regards to what reaches voters in elections. Party logic is not exempt from this flaw. In a system in which media coverage is determined solely by party hierarchy, there would never be a chance for candidates from lesser known parties to have a chance at election. This

extreme is typically regarded as “partisan logic”, in which the press serves as a mouthpiece for political elites [15].

Ideally, we would want to see a balance between party and media logic; that way the sanctity of freedom of the press is preserved, but popular political parties that appeal to larger numbers of voters are receiving proportionate coverage. Peter van Aelst and his colleagues found that this was, in fact, the case. The distribution between the two was not perfectly split, but their results indicated that electoral candidates and their parties seemed to understand the respective power of the two logics and attempted to manipulate both to their advantage in order to maximize voter retention [17].

van Aelst also mentions the power of celebrity, marketability, and aesthetics that surround newsworthiness and media logic. This brings me the question of gender as it relates to the perception of female candidates in the media. Depending on race type and country, various studies have shown different results in the type and quantity of coverage that female candidates receive. In some cases, the marketability and outward appearance of a candidate can induce more coverage while in other cases, female candidates receive less coverage than their male counterparts [11]. Even the beauty of a candidate is not exempt from scrutiny, with an increase in beauty (as classified by Berggren) always inducing a statistically significant increase in votes, more so for women over men [3]. Understanding the marketability of candidates through arbitrary measures such as appearance and gender can arguably allow parties to put forth candidates that align with the gender preferences of the party’s voter base in an act of rent-seeking behavior.

In examining an electoral field that is contingent on so many moving parts, I have concentrated these topics and mechanisms into a series of questions that take into account structural advantages of the two front running candidates from the Republican and Democratic parties respectively. This eliminates the possibility of reverse causality from party logic and allows me to assess the impact of media coverage on electoral outcome assuming autonomous press coverage. I have done this by compiling a data set that draws on numerous sources to take

into account political and economic sentiments, opinions towards gender equality by voters, incumbency status, and political party in each state.

Within this context, my analysis uses quantity of coverage for a gubernatorial candidate in the month before an election as a proxy for public information about the candidate. The concentration of media power into relatively few number of outlets [12] globally implies a certain degree of cohesion in news distribution. More specifically to the United States, although the media landscape may appear to be competitive in terms of the market, this does not carry over to individual media consumption, as a large share of the electorate receives their information from a small grouping of sources [14]. Therefore, assuming a direct relationship between mention of candidates in news and information about that candidate being conveyed is not a far leap, especially since a single news source may exist as most American's primary, if not singular, source of information about a candidate.

With regards to the gender aspect of this paper, the gaps in campaign coverage both in terms of positivity and quantity vary for both men and women in senatorial races to a larger degree but also in gubernatorial races [11]. But what about coverage that discusses both candidates? Do articles relevant to the election or to both candidates have any impact on race outcome for one candidate over another? Does this change with the gender of the candidate or election competitiveness? Finding that increased general election coverage can sway an election towards one candidate over another could be an indicator of bias in the language surrounding candidates.

I hypothesized that increased quantity of newspaper coverage for either candidate in the month before the election would increase the votes received for the covered party, as the distribution of information about candidates is integral to the voting tendencies of the electorate. Rather, the results showed that state newspaper coverage of a democratic challenger positively affects the number of votes the republican candidate would receive as the plurality party candidate and vice versa. Results of the OLS models also clearly demonstrate the incumbency effect irrespective of party status and show a marked increase in republican

plurality party votes when the democratic candidate was a female.

2 Methodology

Previous literature has outlined four categories that routinely impact election outcome and it is through the lens of each of these categories that I have framed my question and chosen my controls. The categories are: electoral office, political context, incumbency status, and gender [11]. Going through these categories one by one, I have compiled an aggregate data set that takes into account each section. I have analyzed races for state governorship and coded for candidate gender. For the political/economic context at the time of the election, I have chosen to include four data sets that aim to encompass the varying facets of political economy. The first is Koch and Thomsen's data set on Gender Equality Mood Across States and Over Time, in an effort to assess state specific sentiment towards women. Then, to include more traditional and market based indicators of economic and political climate, I have added the Philadelphia Fed's State Coincident Indices and select variables from the Correlates of State Policy from Michigan State University's Institute for Public Policy and Social Research. Additionally, I have included data on the gender composition of state legislatures as scraped from Rutger's Center for American Women and Politics.

Given the time constraints of this project and the difficulties in compiling media data, I have chosen to examine the power of the pure press, that is purely written sources. When “media coverage” or “press coverage” is mentioned, it is referencing the most or second most widely distributed newspaper in each state [14]. Races that garner such a large amount of attention may heavily influence voters in the relevant state to vote differently than if left to make their own decisions without a barrage of election coverage.

I have only included the quantity of coverage in the month before the election because this is the time during which voters are more likely to be reading coverage of candidates as

they prepare to vote.

Typically, when papers discuss “close elections” they must specify the vote margin by which they are classifying closeness. This margin is often times arbitrary and specific to the needs of the study. In order to circumvent this parameter specification step and to better take into account true election competitiveness; I have elected to use the widely accepted Competitiveness Index developed by the National Institute on Money in State Politics (NIMSP). This index takes into account both vote and financial competitiveness in gubernatorial elections, allowing me to accurately capture the structural advantages that candidates have over one another. This eliminates the possibility of bias in my results.

The variables that are incorporated into my data set from the Gender Mood Across States and Over Time by Julianna Koch and Danielle Thomsen contain interpolated values for every other year to account for gaps in the data. Linear trend estimation was used given the small size of the gaps. This dataset also includes data on the moralistic vs. traditionalistic classification of each state. As seen in Figure 1.

To compile my state-specific newspaper data, I used the news aggregator *World Access News* which has archival data of the most widely distributed newspapers in 32 states. It also contains data for the second or third most widely distributed newspapers in another 16 states. That is then filtered in For the final two states I used *Factiva* to access *The Boston Globe* and *The Wall Street Journal* as their archives were not available on *World Access News*. I have included the lesser distributed sources in my data with the understanding that there is a potential for underestimation of the effect of coverage on plurality party votes. This may be the case given that only one newspaper was included per state and that for many of those states it wasn’t even the most widely distributed newspaper. Alternatively, if the top three most widely distributed newspapers in the state represent the majority of unique articles circulating in that state, there will be no underestimation. A most accurate assessment of this phenomenon until it is examined in future research is that my results will be lower-bound with regards to the unique articles in circulation.

Moralistic vs. Traditionalistic States
Assessed over the last 20 years

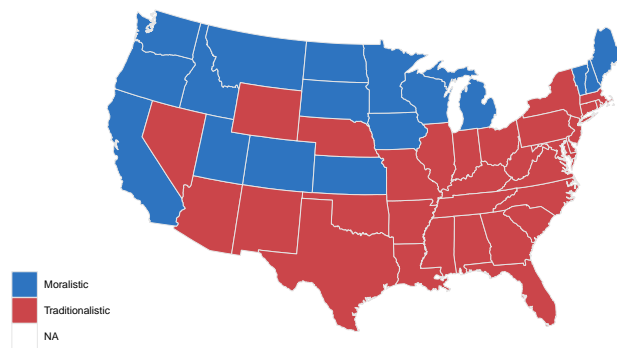


Figure 1: Koch and Thomsen's classification of states

Traditionalistic states are states are characterized as seeing government as necessary to maintain order, with only elites involved in politics. Moralistic states see the government as an important player in the betterment of society [1]

To find election coverage relating to the elections of interest, I restricted the date range to the “hot zone” month before the election and the specific state, and searched the Lead/First Paragraph of the article for mention of terms like “governor”, “gubernatorial”, “state race”, and of course the name of the respective Republican and Democratic front runners. I then used Boolean operator combinations for each election to manually collect three different classifications of coverage for each election:

1. Quantity of coverage that mentions the Democrat and Republican

- (a) Governor OR Gubernatorial OR Governorship) AND (“FullRepName” OR LastRepName) AND (“FullDemName” OR LastDemName)

2. Quantity of coverage that mentions only the Republican

- (a) (Governor OR Gubernatorial OR Governorship) AND (“FullRepName” OR LastRepName) NOT (“FullDemName” OR LastDemName)

3. Quantity of coverage that mentions only the Democrat

- (a) (Governor OR Gubernatorial OR Governorship)AND (“FullDemName” OR LastDemName) NOT (“FullRepName” OR LastRepName)

This data set was analyzed by running four basic OLS models that regress candidate specific coverage that is interacted with incumbency statues on plurality party votes (Republican and Democrat only) with controls for incumbency, competitiveness, gender, and political and economic climate. This interaction allows me to separate the effects of newspaper coverage for incumbents and challengers on plurality party votes, for a more detailed analysis.

Finally, I will note that the novelty of this project comes from my inclusion of election competitiveness as a variable in my analysis. There are very few papers in the literature

surrounding media and elections that adequately control for the structural advantages of certain candidates and political parties which may have incurred bias in their results. Its major contribution to the literature is the compilation of the data set used here. Comprehensive newspaper data is notoriously difficult to aggregate given privacy and data restrictions and the extensive work that has been done here presents a carefully compiled and comprehensive data set to be used for future research.

Table 1: Summary statistics

Statistic	N	Mean	St. Dev.	Max
Quantity of Coverage for Democrat	207	3.643	8.584	96
Quantity of Coverage for Republican	207	4.222	9.811	102
Total Quantity of Election Coverage	207	16.184	30.234	196
Percent Women in State Legislature	207	23.551	7.303	41.100
Percent Votes for Republican	207	51.497	10.783	79.780
Percent Votes for Democrat	207	48.503	10.783	82.090
PHL Coincident Index	207	98.792	11.552	133.782

3 Models

In order to assess the effect of local newspaper coverage on election outcome, I constructed two models per party in varying levels of simplicity. Models (1) and (2) regress competitiveness of election, whether or not the state is moralistic or traditionalistic, the genders of both candidates, and the total quantity of coverage that both candidates received on the vote percentage that each party received.

Basic Models

$$\begin{aligned} RepublicanVotesPercent = \beta_0 + \beta_1 TotalNewspaperCoverage + \beta_2 DemocratFemale + \\ \beta_3 RepublicanFemale + \beta_4 moralistic + \beta_5 competitive \end{aligned} \quad (1)$$

$$\begin{aligned} DemocratVotesPercent = \beta_0 + \beta_1 TotalNewspaperCoverage + \beta_2 DemocratFemale + \\ \beta_3 RepublicanFemale + \beta_4 moralistic + \beta_5 competitive \end{aligned} \quad (2)$$

Interaction Models

$$\begin{aligned} RepublicanVotesPercent = \beta_0 + \beta_1 CoverageofDemChallenger + \beta_2 CoverageofRepIncumbent + \\ \beta_3 RepublicanFemale + \beta_4 DemocratFemale + \beta_5 competitive + \beta_6 moralistic + \\ \beta_6 PercentWomenStateLegislature + \beta_7 PHLCoincidentIndex \end{aligned} \quad (3)$$

$$\begin{aligned} DemocratVotesPercent = \beta_0 + \beta_1 CoverageofDemIncumbent + \beta_2 CoverageofRepChallenger + \\ \beta_3 RepublicanFemale + \beta_4 DemocratFemale + \beta_5 competitive + \beta_6 moralistic + \\ \beta_6 PercentWomenStateLegislature + \beta_7 PHLCoincidentIndex \end{aligned} \quad (4)$$

Gender Interaction Models

$$\begin{aligned}
 \text{RepublicanVotesPercent} = & \beta_0 + \beta_1 \text{competitive} + \beta_2 \text{moralistic} + \beta_3 \text{RepublicanFemale} + \\
 & \beta_5 \text{RepCovgIfDemFemale} + \beta_6 \text{DemCovgIfRepMale} + \beta_4 \text{DemocratFemale} + \\
 & \beta_6 \text{PercentWomenStateLegislature} + \beta_7 \text{PHLCoincidentIndex}
 \end{aligned}
 \tag{5}$$

$$\begin{aligned}
 \text{DemocratVotesPercent} = & \beta_0 + \beta_1 \text{competitive} + \beta_2 \text{moralistic} + \beta_3 \text{RepublicanFemale} + \\
 & \beta_5 \text{RepCovgIfDemMale} + \beta_6 \text{DemCovgIfRepFemale} + \beta_4 \text{DemocratFemale} + \\
 & \beta_6 \text{PercentWomenStateLegislature} + \beta_7 \text{PHLCoincidentIndex}
 \end{aligned}
 \tag{6}$$

Models (3) and (4) specify coverage that particular party candidates receive depending on incumbency status and gender. These models also include a control for economic climate; namely, the PHL Coincidence Index: an index that combines four state level variables—nonfarm payroll employment, average hours worked in manufacturing by production workers, the unemployment rate, and wage and salary disbursements deflated by the consumer price index (U.S. city average)—into one indicator. The percentage of women in state legislature is also included as a control as a proxy for public sentiment towards female politicians. And finally, whether a state is moralistic or traditionalistic and a control of structural advantage, as measured by the competitiveness index. The interaction variables included in this model measure the specific relationship between incumbency status and quantity of coverage received. The inclusion of the relationship between these two variables measures the more specific impact on election outcome and vote percentage. The interaction variables included in models (3) and (4) are as follows: the quantity of coverage a democratic incumbent receives, the quantity of coverage a republican challenger receives, the quantity of coverage a

republican incumbent receives, and the quantity of coverage a democratic challenger receives. This uniquely positions my regressions to measure how the incumbency advantage interacts with quantity of coverage received and its impact on plurality votes.

Models (5) and (6) regress gender interaction variables onto the plurality party vote percentage as in previous models. The control variables in these final models are the same as models (3) and (4). The differing factors here are the unique interaction variables that contain information on candidate gender and quantity of coverage received. In model (5), RepCovgIfDemFemale represents the interaction variable between coverage for republican and democratic opponent gender. It quantifies the effect of change of coverage quantity for a republican when the democratic opponent is female. DemCovgIfRepFemale represents the interaction variable between coverage for democrat and republican opponent gender. It quantifies the effect of change of coverage quantity for a democrat when the republican opponent is male. In model (6), the same pattern of interaction is present, but flipped to reflect the party-dependent y variable. RepCovgIfDemMale represents interaction variable between coverage for republican and democratic opponent gender. It quantifies the effect of change of coverage quantity for a republican when the democratic opponent is male. DemCovgIfRepFemale represents the interaction variable between coverage for democrat and republican opponent gender. It quantifies the effect of change of coverage quantity for a democrat when the republican opponent is female. The purpose of these gender interaction regressions is to scan the data for non-intuitive results that may be missed otherwise.

These models will likely underestimate the effect that newspaper coverage will have on per party vote distribution as the coverage per party only includes coverage in which one candidate's name is mentioned, but does not take into account articles that mention the names of both candidates. There is also the factor of only one source being taken into account, as well as only the second and third most widely distributed newspapers being taken into account in some states.

4 Results

The results are summarized in Table 2, 3, and 4, located at the end of this section. I have included only the models that regress onto the republican party plurality vote percentage since the results were almost exactly mirrored in a perfect trade-off in the democrat model. It was found that there are numerous factors that influence plurality votes; the incumbency and party status of the candidate dictated whether or not increased coverage was helpful or hurtful in increasing vote percentage for their party. The quantity of coverage a democratic challenger received was highly significant, and the greater the amount of coverage the less votes the Republican candidate received. This holds true when the Republican candidate is a challenger, as well. Intuitively, this makes sense because challengers, regardless of party status, are unknowns. Therefore, any coverage at all will acquaint them with the public on numerous levels, like policy stances, personality, and core ideals. This manifests itself in an umbrella effect of increased plurality votes for the challenger's respective party. When the quantity of coverage for a democratic challenger increases by one unit, the plurality votes the republican candidate receives decreases by 0.428 percent. When the quantity of coverage for a republican challenger increases by one unit, the plurality votes the democratic candidate receives decreases by 0.263 percent. Conversely, when the quantity of coverage for a republican incumbent increases by one unit, the plurality votes the republican candidate receives decreases by 0.263 percentage points. This same result is also mirrored when the democratic incumbent receives coverage.

Moreover, incumbency status was a highly significant factor for both parties, but gender was only significant when the democratic candidate was a female. Meaning that when there was a democratic female in the race, the amount of votes that the republican candidate received, all else equal, almost quadrupled. The incumbency advantage has been developed and expounded upon in previous literature. So, the baseline confirmation of this phenomenon was useful in verifying the accuracy of the remaining results.

The percentage of women in state legislature was also highly significant, indicating that the more women there are in state legislature, the more votes the democratic candidate receives. This result likely just indicates that majority democratic states are more likely to elect women to positions of political power than democratic states, which is illustrated in Figure 2.

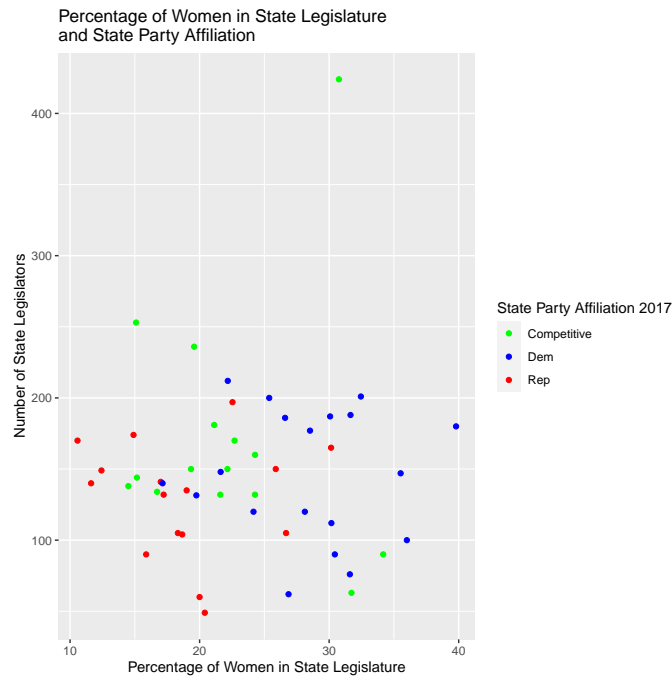


Figure 2: Percentage of Women in State Legislature

Table 4 outlines the regression results for models (5) and (6) in which we see similar significance across repeated variables, controls and otherwise. I find that there is one new variable of significance that is the quantity of coverage for the republican when the democratic candidate is a female. When the quantity of coverage for the republican candidate increases by one unit and the democratic opponent is a female, the republican plurality votes decrease by 0.261 percent. This is likely due to the confounding variable of news content, which is not measured here. There are fewer instances of women gubernatorial candidates historically and therefore also in this data set, indicating that perhaps there are not enough data points to disregard article content. I also find that that if the democratic candidate is a male, the democratic party will receive almost 5 times the vote as otherwise. This is also an intuitive

representation of gender bias.

Table 2: Basic Model

	Candidate Votes
	Republican
	(1)
Intercept	52.004*** (1.154)
Quantity of Coverage for Both Candidates	-0.051** (0.025)
Democrat Female	3.489* (1.910)
Competitiveness	-3.142 (2.220)
Moralistic	0.304 (1.571)
Republican Female	-0.386 (2.316)
R ²	0.037
Adj. R ²	0.013
Num. obs.	207
RMSE	10.710

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

This table notes that with the increase of quantity of coverage for both candidates by one unit, plurality votes for the republican candidate will decrease by 0.051% in a perfect trade-off with plurality votes for the democratic party. This impact could imply numerous findings that cannot be confirmed until subject to future research. It is highly likely that increased election coverage distributes more information about both candidates to voters that wouldn't have been known otherwise, pushing them to vote retrospectively. Within this data frame this shift in party affiliation meant a slight increase in plurality votes for the democratic party.

Table 3: Interaction Model

	Candidate Votes Republican (1)
Intercept	42.992*** (5.672)
Quantity of Coverage for Democratic Challenger	-0.438** (0.174)
Quantity of Coverage for Republican Incumbent	-0.263* (0.145)
Democrat Female	3.899** (1.521)
Democrat Challenger	7.964*** (1.631)
Republican Incumbent	9.905*** (1.604)
Percent of Women in State Legislature	-0.243*** (0.092)
Election Competitiveness	-1.401 (-3.696)
Moralistic	2.473 (-0.352)
Republican Female	-0.482 (-2.916)
PHL Coincident Index	0.049 (-0.056)
R ²	0.436
Adj. R ²	0.401
Num. obs.	207
RMSE	8.348

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

This table notes that with the increase of quantity of coverage for the democratic challenger by one unit, republican plurality votes will decrease by 0.438% and with the increase of quantity of coverage for the republican incumbent by one unit, republican plurality votes will decrease by 0.263%. This is likely because coverage about an incumbent also indicates coverage about their administration, which may confirm policy biases that voters hold and cause them to alter their voting behavior. If the democratic candidate is a female, republican plurality votes increase by 3.899 times, indicating significant gender bias and stigma around being a democratic female. We also see here that republican incumbents receive 9.905 times more plurality votes than their challenger counterparts. This is a simple demonstration of the incumbency advantage. All coefficients in this table are mirrored in the democratic party model in a perfect trade-off. 18

Table 4: Gender Interaction Models

	Candidate Votes Republican (1)
(Intercept)	52.162*** (6.568)
Quantity of Coverage for Republican when Democrat is Female	-0.272* (0.152)
Quantity of Coverage for Republican	0.297** (0.124)
Quantity of Coverage for Democrat	-0.327*** (0.099)
Democrat Female	5.006** (1.953)
Percent Women in State Legislature	-0.389*** (0.110)
Republican Female	-0.660 (2.480)
Election Competitiveness	-2.853 (2.113)
Moralistic	2.052 (1.662)
PHL Coincident Index	0.077 (0.063)
Quantity of Coverage for Democrat when Republican is Female	-0.100 (0.257)
R ²	0.162
Adj. R ²	0.120
Num. obs.	207
RMSE	10.118

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

This table notes that with the increase of quantity of coverage for the republican candidate when the democratic opponent is female increases by one unit, republican plurality votes will decrease by 0.272%. This is likely due to the confounding variables of newspaper article content, which were not analyzed here and are subject to more research. We also see in this table a reiteration of previously shown results, in which being a democratic female improves republican plurality vote percentage significantly. Also, when the quantity of coverage for a republican increases by one unit the republican plurality votes increase by 0.297 percent. This same increase in coverage for the democrat decreases republican plurality votes by 0.327 percent. These results are mirrored exactly in the democratic party model.

5 Conclusion

In an ideal democratic utopia, each voter would thoroughly read each candidate's website and information pages and then match such information with their beliefs and knowledge about the state of the nation, then make an informed decision. Since this is generally not the case for most voters, we must understand and reconcile the role of the media as the 'middle man' between candidates and voters. The results show a statistically significant impact of quantity of press on election outcomes through plurality party votes, which has interesting implications for the future of unbiased journalistic practice and calls for a change in the way elections are covered. This is particularly important in competitive elections, where the press may play a role in prompting a final push in either direction at close margins.

It also appears that the way candidate gender impacts plurality vote distribution is dependent on party affiliation. Meaning that being a female gubernatorial candidate only statistically impacts vote distribution if said candidate is a democrat. This confirms that voters have preconceived biases about policy stances and party affiliation as detailed in retrospective voting theory. These biases prevent Americans from voting for best candidate as based on merit. Moreover, I note that the role that the pure press has in moving a challenger from the sphere of an "unknown" to a "known" figure is extremely significant. This indicates an increased social responsibility for local newspapers for election coverage.

Going forward, there needs to be more research taking into account newspaper ownership and partisan bias, as this study does not. There is also an urgent need for more research that studies the impact of news article content on similar vote distributions and election outcomes. Understanding how article tonality and language usage can be classified as "positive" or "negative" press may have an additional impact on election outcomes that is not represented in the sheer quantity of coverage.

This paper provides the tools necessary to expound further on this area of research through

its compiled data set. The time and effort required to compile the various information used to control my media environment can be added to and used in future research and is available to other researchers. There is a potential here for the addition of information about article content to this data set, as well as further study about gender and political climate in relation to the number of unique articles included here.

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