Evaluating the Effectiveness of Campaign Speeches: Evidence from the First National Speaking Tour*

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Abstract. This paper examines the effect of campaign visits in the context of the unique one-sided nationwide speaking tour by a US Presidential candidate. During the 1896 election, the Democratic candidate went on a whistle stop train tour, while the Republican followed a front-porch campaign. To identify the causal effect of campaign speeches, we exploit several estimation strategies, including a within-county difference-in-differences design and a neighbor-pair fixed effect estimator. We find that one speech given by the Democratic candidate increased his vote share by about one percentage point on average. This increase stems from the persuasion of previously non-aligned industrial workers.

Keywords: Elections, campaign strategies, persuasive communication

JEL classification: D72, N41, N71, P48

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1 Introduction

In the run-up to the 2020 presidential election, the Democratic candidate Joe Biden announced that due to the coronavirus pandemic he will not address voters in person in campaign rallies, but from his home using web technologies.[1] This would have turned the 2020 into the first election in over a century where only one candidate hits the campaign trail.[2] Indeed, one-sided campaigns are an extremely infrequent phenomenon in pluralist democracies, testifying of the importance candidates give to in-person contact despite the opportunities that technological innovations offer to reach an ever-growing audience.

Yet, while campaign visits remain one of the oldest and most important electoral campaign strategies, there is still little convincing evidence of its causal effects on voting outcomes. The identification of a causal impact of campaign visits on vote outcomes is particularly challenging for at least three reasons. First, in pluralist democracies, candidates should choose the same allocation of campaign resources in equilibrium, so that they cancel out each other's efforts. Second, voters self-select into political meetings reducing candidates' margins to affect their preferences. Third, candidates can exploit detailed information from polls to target voters that are more receptive to their message.

In this paper we evaluate the effect of campaign visits in a unique and ideal historical context: the first one-sided nationwide speaking tour by a US Presidential candidate. In the 1896 election, due to limited funding, the Democratic candidate William Jennings Bryan broke with tradition and adopted an unprecedented campaign strategy by using the rail network to go on a national speaking tour. From September to early November 1896, Bryan gave more than 700 speeches, addressing an estimated 4 million voters. In contrast, his opponent the Republican William McKinley, followed a traditional front-porch campaign, inviting voters to his house. While Bryan went on to lose the election, his campaign strategy was adopted by the Republican party by 1900.

[1] "Joe Biden is stuck running for president from home. But front porch campaigns have a long history", *ABC news*, 15 Aug 2020.

[2] In late August 2020 Joe Biden retracted on his early decision, making it the 31st consecutive election in which both candidates went on the campaign trail.

Our empirical framework allows us to overcome methodological issues related to identifying the causal effect of campaign speeches. Firstly, this is the only campaign in the US election history during which only one candidate went on the trail. Second, the lack of detailed information on voter preferences and the constrains of the railroad network resulted in the candidate choosing localities primarily based on their size. Finally, due to its novelty, the campaign drew immense crowds, increasing the scope for persuasive communication.

To estimate the effect of speeches on electoral support, we exploit several estimation strategies. In our baseline approach, we estimate cross sectional OLS regressions; the results suggest that places where Bryan spoke showed an increased support for the Democrats in the election, conditional on previous electoral outcomes, State fixed effects and observable county characteristics. Yet, the places visited by Bryan were not more likely to vote for the Democratic candidate in any of the previous three elections. Those counties are nonetheless different along several dimensions. Most notably, speech counties are more populated and industrial; as such, they could also differ in other aspects, which would not be captured by our control variables. To address the influence of unobservables, we formally assess how important selection on unobservables has to be to explain away the effect of Byran's campaign speeches.

We then exploit the panel structure of our data and estimate a within-county flexible difference-in-differences specification that accounts for time-invariant unobserved heterogeneity, but also allows for the effect of observable characteristics to vary in time. Throughout all specifications, we estimate a positive effect of speeches that is significant and economically meaningful, and that amounts to an increase in the Democratic vote share by about one percentage point. We investigate the sensitivity of these results by performing neighbor-pair fixed effects estimations, within-district estimations, and matching counties on observable characteristics. The results confirm our findings. We also show that campaign speeches affected the Democratic vote share in the House elections.

Finally, we evaluate whether the gains resulted from persuading voters or mobilizing citizens that were already more supportive of the candidate's program. To disentangle between these two components, we analyze the effect of speeches in two different sub-groups, work-

ers and farmers. We find that speeches had a larger effect in locations with many industrial workers, suggesting that Bryan succeeded to persuade new voters rather than to mobilize the already predisposed agricultural electorate. This finding is cross-validated in regressions using the Republican vote and turnout as the outcomes. While campaign speeches reduced the Republican vote share, they did not have a statistically significant effect on turnout, confirming the successful persuasion efforts.

Related Literature. A large literature in political science and economics has studied the different means to deliver political information and their implications for voter choices. In particular, our paper relates to previous work studying the effect of campaign visits on voter preferences.[3] Early contributions developed the hypothesis that political campaigns have only minimal effects on votes ("minimal effect hypothesis"). However, this early literature struggles in credibly identifying causal effects (DellaVigna and Gentzkow, 2010). In addition, many previous papers looked at the effects of two simultaneously campaigning politicians, making it difficult to identify aggregate effects, since campaigns might cancel each other out. Moreover, the effects could be contaminated by previous electoral campaigns. Finally, these studies are set in times when mass media propagate campaign messages and images of visits, blurring further the effect of campaigning. More recent papers find results that are mixed. Some contributions document a positive effect for one of the candidates running, which they attribute to the higher quality of the campaign, such as Heersink and Peterson (2017) that look at the campaigns of Truman and Dewey in 1948. Other studies find no effects, such as Selb and Munzert (2018) that study the impact of Hitler speeches.[4]

Our paper contributes to these studies and differs in three important aspects: first, we analyze the effect of a candidate's campaign visits compared to a candidate running a front-porch strategy, thereby eliminating the possibility of offsetting campaign messages and identifying a general equilibrium effect (see Kalla and Broockman (2018)). Second, we try to improve on

[3] See Kalla and Broockman (2018) and DellaVigna and Gentzkow (2010) for reviews of field and natural experiments, respectively.

[4] As in our paper, Selb and Munzert (2018) find positive effects in the only one-sided campaign in their sample taking place in 1932. We improve upon this finding by using a much larger electoral campaign; while Hitler only gave 21 speeches, Bryan gave a full 746 speeches in 1896.

causal identification relative to previous studies by formally investigating selection on unobservables and by applying a flexible differences-in-differences estimator that effectively control for local unobservable county characteristics. Moreover, our setting takes place in a period where print media was local and mass media was absent. Finally, since the campaign is the first of its sort, there are no temporal spillovers from previous campaign efforts.

Besides campaign visits, our study also relates to the literature on political communication and persuasion more broadly.[5] The expansion of the railroad network was a significant technological innovation in the late 19th century. We therefore also relate to the literature investigating the impact of new technologies on political outcomes, such as the radio (Strömberg, 2004), television (Gentzkow, 2006), and the internet (Campante et al., 2017).

2 Historical background & data

2.1 The 1896 electoral campaign[6]

The 1896 US Presidential Campaign followed the 1893 financial crisis that led to one of the worst recessions in US history, with decreasing prices, a threefold increase in unemployment, and widespread political discontent (Romer, 1986). The crisis put great pressure on the Government's gold reserves. Debates about whether to abolish the gold standard and to switch to the coinage of silver ("Free Silver"), that had appeared in the previous decades, intensified and became a central topic of the election. "Silverites" believed that an inflationary expansion of silver would help the economy to grow. Free silver traditionally had a strong support base in the farming population that hoped for increases in crop prices and an easier payback of their credits. On the other hand, bankers and other creditors, as well as entrepreneurs and industrial capitalists feared increasing costs of production and favored deflation.

Running on a free silver platform and promoting the fight of farmers and laborers against elite capitalists, William Jennings Bryan became the presidential candidate of the Democrats,

[5] See Gerber et al. (2011) and DellaVigna and Kaplan (2007) for two seminal contributions.
[6] This section draws heavily on Jones (1964).

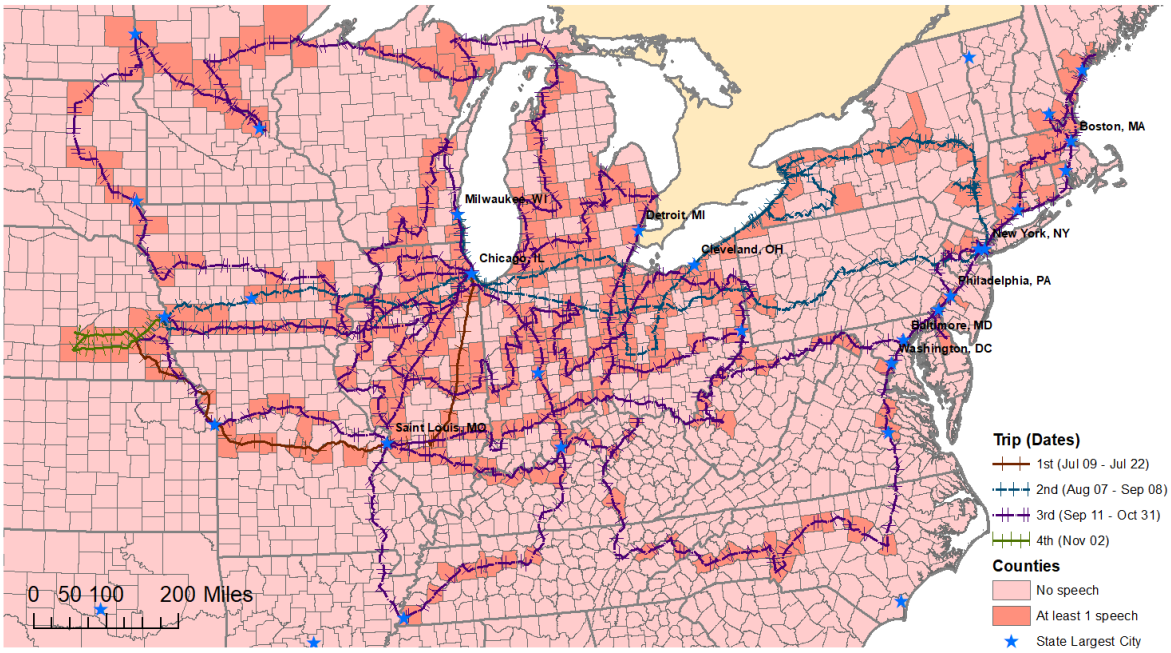
the Populist Party, and a branch of the Republicans ("Silver Republicans").[7] His opponent was William McKinley, a Republican that rejected inflationary policies. The electoral landscape was partly pre-determined. While Bryan had a strong voter base in the South and Mountain states, McKinley could be sure to win the Eastern states. The decisive battleground was therefore in the states of the Midwest and those of the border regions to Canada.

To win the presidential race, Bryan and McKinley followed very different campaigning strategies. McKinley could rely on the well-oiled fund raising machinery of the Republican party that targeted donations from business owners and raised a total of about $3.6 million (Pixton, 1955). McKinley's campaign used the funds to finance rallies and print propaganda that intended to throw mud at the Democratic candidate, calling him a "Popocrat". In addition, McKinley invited about 500,000 voters to his home in Canton, Ohio, where he would address his visitors. Bryan's budget, on the other hand, was meager and amounted to only $675,000 (Pixton, 1955). In light of this financial shortage, Bryan decided it would be cheaper for him to travel personally to the electorate than to bring people to him. Bryan - who appears to have been a mesmerizing orator - hoped that this way he could speak to a much greater number of voters, and convince them to vote for him. While McKinley's staff also considered to go on tour, McKinley did not believe that his speaking abilities were on par with Bryan's and responded to his advisors: "I might just as well put up a trapeze on my front lawn and compete with with some professional athlete as go out speaking against Bryan." (Jones, 1964, p. 277).

In an unprecedented campaigning strategy, Bryan became the first candidate to criss-cross the nation and to address large parts of the public face-to-face using the state-of-the-art mode of transportation, the railroad. Bryan traveled on four separate trips to 546 cities, in 386 counties, and 26 states, covering 18,009 miles according to his own diary. He gave a total of 746 speeches in 113 days, addressing an estimated 4 million voters. Bryan's speech was almost always identical and focused heavily on the issue of free silver. It drew large and enthusiastic crowds that would celebrate his appearance with all day-long festivities and demonstrations. The numerous attendance to his speeches also left an impression on the Republicans who re-

[7] Issues other than silver to which Bryan made major reference were the income tax, states' rights, and the coercion of farmers and the laboring class voters by bankers and employers (Jones, 1964, p. 314).

Figure 1 – Bryan speeches in the 1896 campaign



Note: Map of William Jennings Bryan presidential campaign in 1896 by trip. County limits as of 1900. Shaded counties are locations with at least one speech. Stars indicate the largest city in each state in the 1890 population census.

sponded with more fierceful attempts to discredit the Democratic candidate. In the early stages of his campaign it looked like Bryan could secure a win in the important states of the Midwest.

Figure 1 illustrates the spatial extent of Bryan's electoral campaign and the counties in which he spoke at least once. All trips departed from his home-base in Lincoln, Nebraska. Bryan's platform already appealed to the farming population that favored free silver, he therefore focused a large part of his campaign on the East and Midwest where he intended to gain the votes of the urban labor population. Secret polls conducted months before the election revealed that the overall majority of workers in Illinois and Indiana intended to vote for McKinley (Jensen, 1971). To win the election, Bryan therefore crucially needed to change the political preferences of the urban population. As evident from Figure 1, Bryan seemed to have targeted indeed the large cities where the manufacturing laborers were located.

Although, the location of Bryan's appearances is consistent with his objective of persuading railroad and factory workers, there was nothing elaborate about the Bryan campaign tour. This was partly due to the absence of credible information about voter preferences and to his cam-

paign manager having "no experience in managing a national campaign" (Jones, 1964, p. 298).[8] Bryan would travel on regularly scheduled public trains; his schedule was not rigid, even though he had a general itinerary plotted. Especially in the early trips, the planned timetable was often overturned from one day to another if a local leader asked for an appearance (Jones, 1964, p. 311). Bryan also detoured for private reasons. For example, after accepting his party's nomination in New York City, he traveled to upstate New York to visit a former teacher of his, giving several speeches along the way (Jones, 1964, p. 308).

Overall, Bryan lost the 1896 Presidential election with 176 electoral votes to 271 won by McKinley - or 46.7% of the popular vote versus a majority of 51.0%. Turnout was almost as high as 80%. Bryan could not win a single state in the Midwest, although he lost in some by close margins: Kentucky by 0.06% (277 votes) and Indiana by 2.85%. He also lost in a couple of West-coast states by close margins: California (0.64%) and Oregon (2.09%). On the converse, he won in the state of South Dakota by 183 votes, or 0.22% of the vote.

2.2 Data

We employ several sources of data. Summary statistics of the variables described are provided in Table 1.

Bryan's Presidential campaign speeches. Information on Bryan's railroad trips and the location of his speeches comes from the University of Nebraska "Railroads and the Making of Modern America - A Digital History Project"'.[9] The data contains for each of the four trips the city in which the speech was given, the date (day/year) and - for a limited number of observations - the time of the day. Information on the crowd size is only available for a small number of speech places. We aggregate the speech data on the county level in order to merge it with electoral outcomes and other covariates described in the following. As Table 1 reports, Bryan

[8] In the late 19th century only State-level straw polls could give some clues about voters preferences. While by mid-October 1896 a large number of straw polls had been conducted, their results were considered too favorable to the Republican to be credible (Thies, 2018). Geer (1991) argues that Bryan might have misinterpreted public opinion because of the lack of credible data.

[9] The data can be accessed via `http://railroads.unl.edu/topics/bryan.php`. Last accessed on Sep 03, 2020.

spoke in about 26% of the counties in our sample, which is composed of counties located in states where Bryan gave at least one speech and that have railroad access.[10]

Electoral outcomes. We use data on party vote shares and turnout from the ICPSR (Clubb et al., 1987). The ICSPR dataset contains information on turnout, the vote shares of parties, and the legally eligible electorate for the period from 1840 to 1972. Our main outcome of interest is the vote share of Democrats over valid ballots in the 1896 presidential election. We construct similar variables for every Presidential election during the 1880 to 1900 period. In 1896 Bryan represented both the Democratic and the Populist party. The vote shares of these two parties are therefore aggregated for previous Congress and Presidential elections. All data is harmonized to the county definitions of 1900. On first sight, average Democratic vote share in the previous election and in 1896 is lower in speech places than in no-speech places, see Table 1. This can be explained by the fact that Bryan targeted his campaign to counties and states in which a Democratic majority was not guaranteed.

County characteristics. Other county characteristics come from several data sources. We compute the (log) distances of each county to the state capital, and to the largest city in the state, its (log) area, as well as its geographic coordinates using ArcGIS.[11] We additionally control for the density of the railroad network (length over area in 1896) using data from from Atack (2013). We calculate demographic characteristics of counties based on the decennial censuses available from the National Historical Geographic Information System (`NHGIS.org`). In particular, we compute the (log) population per county, and the population share of whites, male above 21 years, and natives. We also construct the share of farmers and manufacturing workers that played an important role in the 1896 election. Following Gentzkow (2006) we linearly interpolate the data for inter-census years.

Speech-counties are different among several dimensions: they are more urban, significantly

[10] In 1900, there were 2,840 counties in the United States. 1,632 counties are located in states with at least 1 speech. Full data on electoral outcomes and covariates is available for 1,392 of the 1,498 counties that had access to railroads in 1896. Bryan gave a speech in 19 counties for which data is missing. By restricting the sample to counties with railroads we are comparing localities where Bryan could have gone and exclude places that he could not have possibly reached from the control group.

[11] All distance variables are calculated using the Donaldson and Hornbeck (2016) methodology.

Table 1 – Summary Statistics

	(1) Mean	(2) Correlation Dem 1892	(3) Correlation *p-value*	(4) Speech mean	(5) No speech mean	(6) Difference in means	(7) Difference *p-value*
Speech (binary)	0.26	–0.05	0.05	1.00	0.00	1.00	.
Speeches per 10k pop	0.16	–0.10	0.00	0.61	0.00	0.61	0.00
Distance to speech (log)	3.92	0.02	0.56	2.33	4.54	–2.21	0.00
Democratic vote (%) in 1896	48.07	0.70	0.00	47.29	48.35	–1.06	0.14
Democratic vote (%) in 1892	50.92	1.00	.	49.74	51.34	–1.60	0.05
Urban (binary)	0.45	–0.10	0.00	0.77	0.34	0.44	0.00
District population (%)	14.60	0.00	1.00	24.25	11.15	13.10	0.00
Log population	9.93	0.04	0.16	10.47	9.73	0.74	0.00
White (%)	92.29	–0.31	0.00	95.75	91.05	4.70	0.00
Male above 21 (%)	26.82	–0.27	0.00	28.11	26.36	1.75	0.00
Native (%)	88.46	0.32	0.00	85.95	89.35	–3.40	0.00
Railroad density (km per sq. km)	0.08	–0.03	0.21	0.12	0.07	0.05	0.00
Dist to state capital (log)	4.86	–0.03	0.23	4.62	4.94	–0.33	0.00
Dist to state largest city (log)	5.05	0.03	0.30	4.72	5.17	–0.45	0.00
Latitude	40.53	–0.44	0.00	41.00	40.36	0.64	0.00
Longitude	–86.25	0.09	0.00	–86.14	–86.29	0.15	0.74
Farmers (%)	51.35	0.11	0.00	40.10	55.38	–15.28	0.00
Manufacture workers (%)	3.64	–0.09	0.00	5.95	2.82	3.13	0.00
Observations	1,392	1,392	1,392	367	1,025	1,392	1,392

Notes: All statistics at the county level. Campaign variables come from the University of Nebraska *Railroads and the Making of Modern America - A Digital History Project*. Election data from ICPSR (Study no. 8611). Railroad data from Atack (2013). Population data from the National Historical Geographic Information System. Descriptive statistics for all counties in Column (1). Correlation with Democratic vote in 1892 in Columns (2) and (3). Characteristics of speech and no-speech counties in Columns (4) and (5), and test of means equality of these two groups in Columns (6) and (7).

more populated, and more industrial than no-speech counties. This is in line with the observation that Bryan targeted the urban population which, according to the historical accounts, was not favorable to his central theme of free silver, at least less so than the farming population. The results of the balancedness test imply for our econometric strategy that selection on unobservables (if correlated positively with selection on observables) should work against finding an effect of Bryan's campaign on the Democratic vote share, and possibly introduce a downward bias. We will formally investigate selection on unobservables in the empirical section below.

3 Estimation strategy & results

In this section we estimate the impact of William Jennings Bryan speeches on the vote share of the Democratic party in the 1896 election.

3.1 Baseline specifications and main results

Cross-sectional evidence. We first estimate the following cross-sectional model by Ordinary Least Squares (OLS):

$$dem_c = \beta_0 + \beta_1 speech_c + \beta_2 dem_{c,t-1} + Z_c'\gamma + \zeta_s + \varepsilon_c \quad (1)$$

where dem_c indicates the Democratic vote share in county c of state s in 1896, $speech_c$ is a measure of the speeches Bryan gave in county c (more details below), $dem_{c,t-1}$ is the vote share of the Democratic and Populist party in c in the 1892 election, Z_c is a vector of controls containing demographics, railroad density and geographic controls, as well as the share of farmers and manufacture workers as described in the previous section and ζ_s are state fixed effects. Standard errors ε_c are clustered at the level of the Congressional district, since House elections take place on the same day. As the treatment is spatially correlated, we also compute standard errors adjusted for spatial correlation following Conley (1999), assuming a cutoff distance of 85 km which corresponds to the average surface of a Congressional district. The coefficient of interest is β_1, the effect of Bryan speeches on the Democratic party vote.

Table 2 reports the estimation results of Equation (1). In Column (1) we use a binary speech variable that takes the value 1 if Bryan gave at least one speech in the county. The estimated coefficient is positive and highly statistically significant, implying speeches increased the Democratic vote share, conditional on the vote share in the previous election, demographic controls and state fixed effects. In Column (2) we add geographic and economic controls, which increases the magnitude of the effect to 1.2 percentage points. The magnitude of the effect is comparable to an increase in the 1892 Democratic vote share by 1.5 percentage points (or 0.1 sd of past vote).

The binary measure of speeches has the advantage of being easy to interpret, but does not take into account the frequency of Bryan's visits. In Column (3) we present the results when using the number of speeches normalized by county population. The results are very similar. In Column (4) we test the argument that the increase in candidates' popularity is an increasing

Table 2 – Cross-sectional evidence

Dep. Variable *Democratic vote (%) in 1896*	(1) Speech (binary)	(2) Speech (binary)	(3) Speeches/ 10k pop	(4) Speeches/ 10k pop	(5) Distance (log km)
Speech variable	1.039	1.230	1.200	2.345	–0.373
	(0.330)***	(0.312)***	(0.335)***	(0.521)***	(0.136)***
	[0.354]***	[0.336]***	[0.589]**	[0.420]***	[0.163]**
Speech variable squared				–0.507	
				(0.131)***	
				[0.081]***	
Democratic vote (%) in 1892	0.816	0.817	0.817	0.817	0.823
	(0.029)***	(0.027)***	(0.027)***	(0.027)***	(0.027)***
	[0.034]***	[0.024]***	[0.024]***	[0.024]***	[0.022]***
Populist vote (%) in 1892	0.879	0.815	0.813	0.813	0.815
	(0.045)***	(0.040)***	(0.040)***	(0.040)***	(0.044)***
	[0.042]***	[0.038]***	[0.038]***	[0.038]***	[0.042]***
Demographic controls	Yes	Yes	Yes	Yes	Yes
Geographic controls		Yes	Yes	Yes	Yes
Economic controls		Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Mean dep. variable	48.07	48.07	48.07	48.07	48.41
Mean exp. variable	0.26	0.26	0.16	0.16	3.92
Observations	1,402	1,392	1,392	1,392	1,240
Clusters	220	220	220	220	217
Adjusted R^2	0.81	0.82	0.82	0.82	0.82
Oster's δ	–22.4	–10.4	–11.4	14.1	4.7

Notes: OLS regressions. The unit of observation is a county. Demographic controls: Urban (binary), District population (%), Log population, White (%), Male above 21 (%), Native (%). Geographic controls: Railroad density (km per sq. km), Distance to state capital (log), Distance to state largest city (log), Latitude, Longitude. Economic controls: Farmers (%), Manufacture workers (%). All regression include State fixed-effects. Standard errors clustered at the Congressional district level in parentheses. Standard errors adjusted for spatial correlation in square brackets. * significant at 10%; ** at 5%; *** at 1%.

and concave function of visits, as put forward by Stromberg (2008). Indeed, the point estimates imply that the effect of speeches decreases with the number of speeches (the maximum is reached at 2.3 per 10,000 inhabitants).

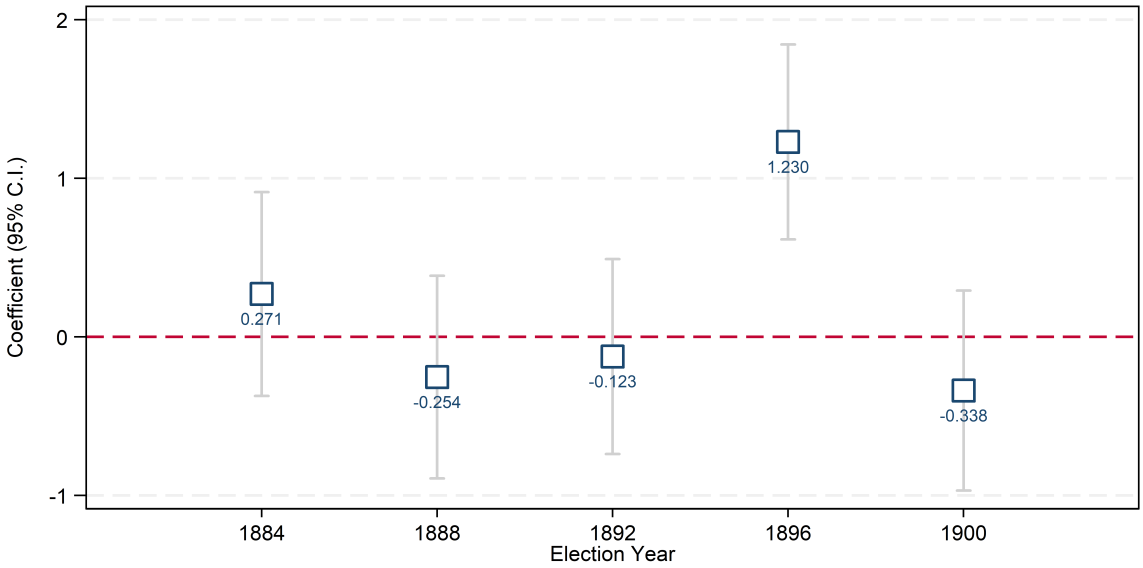
Bryan's speeches attracted large crowds, potentially from neighboring counties. We thus allow the effect to spatially dissipate by using the (log) rail distance of a county to the nearest speech as our treatment variable. Column (6) documents that the Democratic vote share significantly decreases in the distance to a speech. This result suggest that besides the immediate impact in the county where a speech took place, Bryan also influenced vote shares in nearby populations.

Selection on unobservables. The cross-sectional evidence of Table 2 could suffer from omitted variable bias, if Bryan targeted specific counties with characteristics unobservable to us. To formally test how strong selection on unobservables would have to be to explain away the effect of Bryan's speeches, we adopt the method developed by Oster (2019) and compute the δ that puts a value on the strength of selection on unobservables. We evaluate the influence of adding additional controls on the stability of the coefficient compared to a regression that only controls for state fixed effect. The δ values reported at the bottom of Table 2 are either negative (indicating that additional controls increase the treatment effect), or significantly larger than 1 (indicating that selection on unobservables has to be much larger than selection on observables). Overall, these results are consistent with the historical observation that Bryan targeted counties that were not inclined to vote for him, and increases our confidence that selection on unobservables does not bias the effect of Bryan's speeches away from zero. In the following, we will use the binary measure as our main treatment as it is easily interpretable, but results are not driven by this choice.

Cross-sectional falsification. To further test the concern that Bryan might have targeted counties with a pre-existing strong Democratic voter base, we estimate Equation (1) using Democratic votes in 1884, 1888, and 1892 as our dependent variable. The estimates are presented in Figure 2 (see Table A.1 for the regression results). Reassuringly, when estimating the effect of speeches in the elections prior to 1896 (with the full set of controls and state fixed effects), speeches do not have any effect. Compared to the 1896 coefficient, the point estimates are much smaller in magnitude, partly even negative, and highly insignificant throughout. These findings support once more the observation that Bryan did not campaign in locations with a pre-existing Democratic support. The 1900 coefficient is small and insignificant. This finding is consistent with persistence in counties where Bryan gave a speech, as the Democratic vote share does not revert to its pre-1896 level.[12] This interpretation has to be taken with a grain of salt, however, since by 1900 both Presidential candidates adopted Bryan's 1896 innovation.

[12] If the effect did not persist one would expect a coefficient of the magnitude of 1896 but the inverse sign. A regression of the 1900 Democratic vote share on speeches while controlling for the 1892 vote share yields a coefficient of 0.764 ($p - value = 0.027$).

Figure 2 – Cross-sectional falsification



Note: This Figure shows the coefficients and 95% confidence intervals of the effect of a speech given by Bryan on the Democratic vote share obtained from six separate cross-sectional regressions, conditional on the full set of controls and state fixed effects. The corresponding regression results are provided in Table A.1.

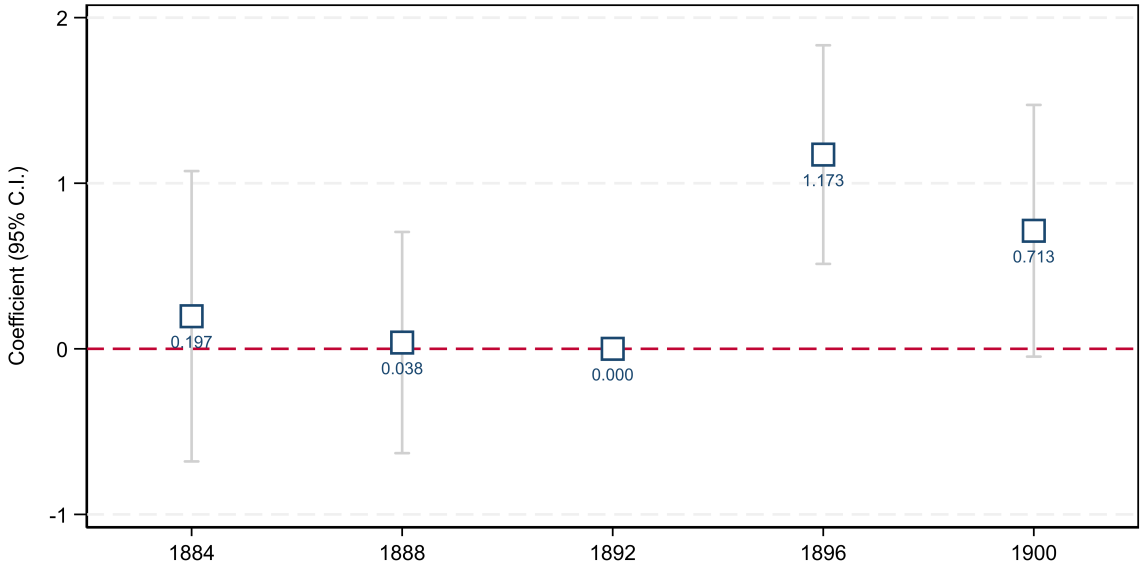
Difference-in-differences specification. To further address the threat that the estimated effect is driven by unobserved, time-invariant county characteristics, we exploit the panel structure of the data and estimate a difference-in-differences specification that includes county fixed effects. More precisely, we estimate the following model:

$$dem_{ct} = \lambda_{st} + \omega_c + \sum_{\tau=1884}^{1900} \beta_\tau \left(speech_c \cdot election_\tau \right) + \sum_{\tau=1884}^{1900} \left(X_c' \cdot election_\tau \right) \gamma_\tau + Z_{ct}' \delta + \varepsilon_{ct} \quad (2)$$

where dem_{ct} is the vote share of the Democratic candidate in county c in election t and λ_{st} and ω_c are state $\times$ election and county fixed effects, respectively. The explanatory variable of interest is the interaction between the Bryan speech measure (which is time-invariant) and a full set of dummies for each year from 1884 to 1900 (the omitted category is 1892). The coefficients β_{1884} and β_{1888} therefore allow to detect pre-exisitng trends in the Democratic vote share in 1884 and 1888 with respect to 1892. We also control for time-varying county controls Z_{ct}, and allow for economic county controls (X_c) to have a differential effect in each election (the coefficients γ_τ).

Figure 3 summarizes the results of the difference-in-differences model by showing the β_τ

Figure 3 – Difference-in-differences specification



Note: This Figure shows the results of estimating the difference-in-differences specification of Equation 2. It displays the coefficients and 95% confidence intervals of the interaction between a speech given by Bryan and year dummies, conditional on county and state × election fixed effects, as well as controls. The corresponding regression results are provided in Table A.2.

coefficients, i.e. the interaction between the speech binary variable and the election dummies. The corresponding regression results and point estimates are shown in Table A.2. The figure illustrates two important results: first, counties with a speech experience an increase in the Democratic vote share of on average 1.2 percentage points in the 1896 election. Second, there are no pre-trends: speech counties were not voting differently in the elections prior to 1896. In fact, the coefficients of the interaction between speeches and the indicators for the years 1884 and 1888 are very close to zero and highly insignificant ($p - values$ of 0.66 and 0.91 respectively).

3.2 Sensitivity and additional findings

Sensitivity analysis. Next, we compare the effect of speeches across adjacent counties. This estimation strategy includes fixed effects for pairs of neighboring counties, thereby comparing two counties sharing similar characteristics, but where only one was exposed to a speech. Panel A of Table A.3 documents a positive and significant effect of speeches on the Democratic vote

share across neighboring counties that is somewhat smaller than in the cross-sectional sample shown above, as one would expect given the possibility of spillover effects.

To ensure that our coefficients do not capture potential differences in local campaigning (for the House election) we also estimate Equation (1) within-Congressional district (instead of within-State). The results, that are globally unaltered, are presented in Panel B of Table A.3. Finally, the results also hold when matching counties on observable characteristics ($\hat{\beta}_1 = 1.148$, $p - value = 0.041$, not shown).

Heterogeneous effects. According to the historical literature, Bryan's main campaign goal was to convince the urban labor population. Column (1) of Table A.5 documents that the effectiveness of his speeches indeed increased with the share of the industrial labor population, but not with the share of farmers. This interaction effect cannot be explained by a differential impact of his speeches in urban places, see Column (2). As Column (3) shows, the effect is stronger in counties where voters had only limited access to other sources of information; data from Gentzkow et al. (2011) indicates that Bryan speeches mattered in counties that had at most 5 newspapers. Finally, speeches given by Bryan closer to the election date have a greater impact; speeches during the first trip (Column 4), or the first 36 days of the campaign (Column 5) did not affect the outcome. These results relate to the literature on short-lived effects of electoral campaigns, as in Gerber et al. (2011).

Effects on turnout and Republican vote. In Panel A of Table A.6 we document that campaign visits increased the Democratic vote share over the legally eligible electorate by 1.2 p.p. (Column 1). Panels B and C decompose this electoral gain into a decrease of the Republican vote by 0.72 p.p. ($p - value = 0.032$) and an increase in turnout by 0.48 p.p. ($p - value = 0.274$, not significant). These results thus confirm the heterogeneous effects evidence presented that implies that the campaign was successful in persuading voters.

3.3 Taking stock: Quantifications

This section tries to assess the overall impact of the Bryan campaign on the National popular vote, the Electoral College, and the House of Representatives composition.

Counterfactual vote. Our counterfactual experiment consists of assuming Bryan performed a traditional "front-porch" campaign, as did McKinley and both Democratic and Republican candidates in campaigns before him. With a budget of $3.6 million McKinley invited about 500,000 voters in Canton, Ohio. Bryan had a budget of $675,000. This allowed him to reach roughly 4 million voters using the railroad network instead of roughly 100,000 voters had he allocated his budget in a similar way as McKinley ($0.2 instead of $7.2 per voter).

To construct our counterfactual vote we assume a constant persuasion rate (regardless of the campaign type) and recalculate the vote share by county with the effect of speeches being 1/40 of its actual effect.[13] The state-by-state and National results are presented in Table A.7. According to our findings, the campaign resulted in an increase at the national level of 20,000 to 65,000 votes (or 3% to 11% of the National difference), depending on the speech measure. Nationwide, this translates into an increase of 0.2 to 0.6 percentage points in the popular vote. Bryan's campaign probably resulted in his very close win in South Dakota and its 4 Electors. No other state electoral outcome would have been overturned. Moreover, the Bryan campaign resulted in 3 to 5 additional seats for the Democratic party in the House of Representatives (see Table A.4 for House election).

Persuasion rate. This result can also give a sense of the persuasion rate of the campaign speeches (DellaVigna and Kaplan, 2007).[14] On average, 21% of the population of exposed counties attended a speech. Actual turnout in exposed counties was 84.2%; counterfactual turnout, as predicted from Table A.6, Column (1), would have been and 83.8%. The estimated counterfactual Democratic vote from Table 2, Column (1), would be 46.1%. Combining these estimates

[13] In other words, in our counterfactual we assume that Bryan would have invited 100,000 voters from the locations in which he gave speeches.

[14] The persuasion rate f in DellaVigna and Kaplan (2007) is calculated as follows: $f = 100 \cdot (v_T - v_C)/(e_T - e_C) \cdot (t_C \cdot t_T)/(1 - v_C)$. This expression takes into account both the effect on the decision to vote, and who to vote for.

with the point estimate of campaign speeches from Column (1) in Table 2 implies that the persuasion rate of the railroad campaign was of 5.96% (min=0.7%, max=56.4%, sd=6.2%). The other two measures of candidate speeches give persuasion rates that are of similar magnitude (2.40% and 3.83%).[15] These persuasion rates are in line with the rates proposed in the literature (between 2% and 20%).

4 Conclusion

In this paper we evaluate the effect of campaign visits relative to a "front-porch" campaign in a unique and ideal historical context: the first whistle-stop tour campaign by a Presidential candidate in the 1896 election. We show, through different identification strategies, that campaign visits increased the Democratic party vote share by about one percentage point on average. Our analysis suggests that is unlikely that this effect is upward biased due to selection on unobservables, and we regard the effect size as a lower bound. Relative to existing studies, we also find that the increase in votes stems from persuading the previously non-aligned industrial labor population, and is not just a mobilization effect that materializes in higher turnout.

More broadly, our findings shed light to the survival of traditional campaign speeches in the age of mass and social media. In-person visits remain one of the most important electoral campaign strategies despite the opportunities that technological innovations offer to reach an ever-growing audience. In the presence of mass media that reduce the informational content of campaign visits (belief-based persuasion), non-informative dimensions may matter more (preference-based persuasion), such as candidate attributes of the mere presence of a Presidential candidate. While this dimension is not thoroughly explored here, we do believe that this unique context could be exploited to distinguish between these two categories of persuasive communication.

[15] We do not calculate a persuasion rate for the distance measure of speeches as it is impossible to calculate counterfactual votes and turnout.

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